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SAVING AND INVESTMENT

HEARING

BEFORE THE

JOINT ECONOMIC COMMITTEE CONGRESS OF THE UNITED STATES

ONE HUNDRED FIRST CONGRESS

FIRST SESSION

JUNE 21, 1989

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JOINT ECONOMIC COMMITTEE

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WEDNESDAY, JUNE 21, 1989

SAVING AND INVESTMENT

WEDNESDAY, JUNE 21, 1989

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room 2253, Rayburn House Office Building, Hon. Lee H. Hamilton (chairman of the committee) presiding.

Present: Representatives Hamilton, Scheuer, and Upton; and Senators Bryan and Roth.

Also present: Joseph J. Minarik, executive director; David R. Malpass, minority staff director; and Chad Stone and Chris Frenze, professional staff members.

OPENING STATEMENT OF REPRESENTATIVE HAMILTON, CHAIRMAN

Representative HAMILTON. The Joint Economic Committee will come to order.

As we noted in the JEC Annual Report, one of the two primary weaknesses of the current macroeconomic environment is the persistent shortfall of saving relative to investment, which has been accompanied by substantial foreign investment resulting in a large trade deficit. But even the level of U.S. investment is challenged by some observers as insufficient in today's competitive world economy.

Today we are fortunate to have three distinguished witnesses to help us to understand the economic processes of saving and investment, to examine the record of saving and investment in recent years, and to consider the role of public policy in encouraging sufficient saving and investment for long-term growth and a satisfactory standard of living for our children and grandchildren.

John Makin is an economist at the American Enterprise Institute here in Washington; Gene Steuerle is a former Deputy Assistant Secretary for Tax Analysis at the Department of Treasury who now heads the Government Finance and Budget Institute; Alan Auerbach is professor of economics at the University of Pennsylvania.

Gentlemen, your prepared statements have been submitted to the committee. They will, of course, be entered into the record in full. We will begin with the testimony of Mr. Makin and move across the table. I would appreciate it if you would summarize your prepared statements so we can turn fairly soon to questions.

Mr. Makin, I understand you have to leave at 11, is it, and we'll certainly accommodate that.

STATEMENT OF JOHN H. MAKIN, DIRECTOR, FISCAL POLICY STUDIES, AMERICAN ENTERPRISE INSTITUTE

Mr. MAKIN. Thank you, Mr. Chairman.

Saving and investment certainly is a subject that is a little bit like apple pie. There's not much you can say against it. I think though it's worth thinking about some basic questions and I will try to cover some of those today and talk a little bit about removing existing disincentives to save in the system rather than trying to add new incentives.

First of all, there are two very basic questions that I think are important to keep in mind. The first is the question of what is the optimal saving rate?

And here, of course, there is some theory to guide us in economic literature: it would be the rate of saving that implies the maximum level of consumption per capita. That's rather esoteric and it's rather difficult to discern from where we are whether we have reached that level or not.

The other question is whether the Government can affect the saving rate. I would approach that issue rather cautiously.

Looking at the United States today in the late 1980's, we have a low national saving rate when we include the Government sector. Of course, the national saving rate is composed of personal saving, private saving, and saving by the Government sector.

The low national saving rate, if one decomposes it in 1989—or 1988, for which we have the data—is due partly to the budget deficit and partly due to a low personal saving rate.

For example, of the $135 billion in America's foreign borrowing this year, that is, the amount of money that we have to import in order to sustain total spending, about two-thirds or $90 billion of that would be accounted for by an unusually low personal saving rate—that is, the saving rate below the longrun average of about 6.5 percent of disposable personal income. The remaining one-third was a result of the unusually large budget deficit.

So what I'm saying is that an unusually low personal saving rate by households accounts for two-thirds of the shortfall of national saving. That means that we have to import about $135 billion a year of saving from abroad in order to finance the current levels of investment.

The question is, again, whether we should try to encourage private saving or personal saving. I think we can start by removing disincentives in the tax system. The prepared statement that I have submitted to the committee suggests that one of the best ways to try to do that would be to operate on saving incentives at the margin. That's an economist's way of saying that we should reward somebody for every extra dollar of saving they do and to perhaps discourage excessive incentives for borrowing.

In order to do that the Treasury—and Gene Steuerle here had a great deal to do with that—proposed in 1984 indexing interest expense and indexing interest income for tax purposes. A kind of crude approach to that would be to tax only half of interest income for households and allow only deduction of half of interest expense.

In my prepared statement I go through that issue. I must say I tackle it head on by including mortgage interest in the provision

that would allow only half deduction of interest. I did some calculations that show that that's really not going to cost the average household that much, because if you discourage borrowing and you encourage saving, interest rates are going to go down. Some very rough calculations suggest that a $100,000 mortgage might cost a household an extra $20 a month.

The side benefit here, of course, is that since the preferences for borrowing are used very heavily you would probably have net revenue gains, considerable net revenue gains from the provision which would allow a deduction of only half of interest expense.

This is viewed generally as a political nonstarter but I've heard about a lot of political nonstarters that if you hang in there, do at some point become reasonable and relevant.

Other incentives, of course, would include restoration of the saving incentives of the individual retirement accounts. The literature on the issue of how they affect saving is certainly mixed. It's difficult to disentangle all of the things that are operating on saving.

I would just point out to the committee that this week I did do some simple calculations, which I did not submit with my prepared statement, to show that a good part of the IRA incentive is still intact. If you consider the incentives implicit in the IRA account, where the $2,000 contribution was deductible and the interest buildup was not taxed, the primary value to the taxpayer, is in the fact that the inside buildup is not taxed. And based on the example we did, which was a 30-year IRA account with a 10 percent rate of earning and a one-third tax rate, the ability to deduct the $2,000 a year is worth about $100,000 over that time period in current dollars and the tax-free inside buildup is worth about $200,000.

So the most valuable part of the IRA plans are still in place. Individuals can still put money into an IRA account, although they cannot deduct the $2,000, and accumulate the interest earnings without paying tax.

I want to say just a few words about investment. I've spoken mostly about saving because I think one of the lessons that we learned in the 1980's was that it's sometimes dangerous to pass tax measures that accelerate the growth of investment without saving incentives. Dangerous in the sense that if you stimulate investment without stimulating saving, then you guarantee that you're going to have to borrow the difference from abroad.

In macro terms, it translates into an expansionary fiscal policy and a tight money policy. In micro terms, it translates into a process where you put into place investment incentives and the private sector invests heavily. What happens when all of those things are going on at once is a side effect that can raise problems for the original investment, that is, the dollar gets a lot stronger.

So in the mideighties, we had a lot of companies that responded to investment incentives, some of them thinking that they would sell their goods in world markets or sell them here. They found that because the dollar had become so strong—that is, it was so attractive to buy foreign goods and so difficult for our producers to sell abroad—that the investment incentives without savings incentives undercut the effectiveness of the investment incentives. We had firms putting capital in place to produce more goods that were

difficult to sell at the exchange rates that were prevalent in the mideighties.

Of course that has passed behind us now. The fact that a lot of redundant capacity was put into place in the mideighties that was not usable until the dollar got weaker, that is, until it became more possible for them to compete, may in my view have something to do with the length of our recovery. We had capacity stored up that we could draw on and that we have drawn on nicely as the dollar has depreciated, and American producers have been able to compete more readily.

I think I'll just summarize by saying that I think the way you go with saving and investment is you encourage saving. More saving means that the conditions for investment are more favorable—that is, interest rates are lower and the funding is available domestically—and the way to encourage saving is to remove the disincentives to save that are in the tax system already.

Last, I noticed on the board it said that we would say a word about capital gains incentives for investment. Here again, I think the main thing to do on capital gains is to index capital gains for inflation. The reason for that is quite simple: if you don't index capital gains for inflation, then you are forcing investors to guess the future inflation rate.

The effective tax rate on an investment is tremendously volatile depending on an inflation rate. Inflation rates that are within the purview of our experience over the past decade can take the effective tax rate on an investment over a 1- or 3-year period from a nominal rate of 28 percent up over 100 percent if you get into double-digit inflation.

So you have individuals contemplating projects who are unable to calculate the real aftertax return if you don't index inflation. So I would hope that that provision would be given some serious consideration.

Here again I am repeating some of the things that were in the Treasury's excellent November 1984 proposal.

Thank you.

[The prepared statement of Mr. Makin, together with attachments, follows:]

PREPARED STATEMENT OF JOHN H. MAKIN*

SAVING AND INVESTMENT

Summary

America's low national saving rate is due more to an unusually low level of personal saving than it is due to an unusually large budget deficit. Of the $135 billion in America's foreign borrowing in 1988 about two-thirds or $90 billion was accounted for by unusually low personal saving while one-third reflected an unusually large budget deficit.

The main reasons for America's unusually low personal saving rate are saving disincentives in the tax code, demographics, mismeasurement of saving and effects on wealth tied to a sharp real dollar appreciation followed by a sharp real dollar depreciation.

My testimony focusses on the encouragement of private saving by the removal of borrowing subsidies and saving disincentives in the tax code. I shall argue in favor of a simplified form of the Treasury's 1984 proposal to curb the tax code's overly generous treatment of interest expense and the tax code's inadequate rewards to savers.

Specifically, I propose incentives to increase saving (instead of to rearrange existing saving as IRA plans did) by taxing only one-half of interest income and allowing deduction of only one-half of interest expense. Benefits include, more saving, lower and less volatile interest rates, a lower budget deficit and simplicity of application. The testimony includes a demonstration that such measures could enhance the affordability of housing even if deduction of only half of mortgage interest expense is allowed.

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* Testimony originally presented at Ways and Means Committee Hearings on the National Saving Rate April 19, 1989.

I apologize to members of the Joint Economic Committee for not providing original prepared testimony. The invitation to testify with today's panel, for which I am most grateful, came too late to allow for preparation of further testimony. I shall endeavor to revise my testimony in the light of comments and discussion at the June 21 hearing.

STATEMENT

A Very Unpopular Argument for Higher Saving, More Affordable Housing and Lower Deficits

Mr. Chairman, I am pleased to offer some views to this distinguished committee on reasons for America's low national saving rate and measures to increase it.

Nearly every serious discussion of the American economy during the last few years has included a recommendation to raise the national saving rate. The best counter argument to the assertion that American budget deficits at about 3% of GNP are average for industrial countries is to observe that such a budget deficit would not be such a serious concern if America's saving rate were as high as that of other countries like Canada, Italy and Japan that have higher budget deficits as a share of GNP.

There are two ways to raise national saving rates. The government's saving rate could be raised if taxes are increased without an accompanying increase in government spending. Alternatively, the private saving rate could be increased by offering additional saving incentives or by removing existing saving disincentives.

In my testimony I shall argue in favor of removing saving disincentives currently in the tax code in order to provide larger incentives for additional saving especially by households. I believe that it is possible by such means to increase the personal saving rate back to its long-run average of 6.5 percent and thereby reduce America's external deficit by approximately $90 billion per year in 1989 dollars.

Taxes versus Saving Incentives to Raise National Saving

I do not favor a tax increase as a means of increasing the national saving rate. I am skeptical of such an approach for two reasons. First, I do not believe that a tax increase would produce a dollar for dollar increase in national saving. This is particularly likely to be the case in the late 1980's because of the sharp cuts that have occurred in popular domestic programs since 1980. Domestic programs, (non-domestic discretionary programs) have fallen from 5.9 percent of GNP in 1981 to 3.7 percent of GNP in 1988 and 1991 and are projected to drop further to 3.3 of GNP in 1994. The fact that much of deficit reduction has been achieved through sharp cuts in popular domestic programs makes it highly likely that higher taxes would be used largely to finance restoration of such programs.

The second reason that I oppose higher taxes is that taxes have already been increased from a 1965-85 average of 18.5 percent of GNP to 19.6 of GNP in FY 90. Further, higher taxes introduce larger economic distortions. Estimates by John Shoven and others suggest that such distortions cost the economy about $1.30 for every additional dollar of revenue.

I am well aware that by proposing additional incentives for private saving I am entering controversial territory. The conventional wisdom about saving is that no one knows what makes it go up or down much less what tax policies would encourage it or discourage it.

Undaunted by these discouraging propositions I would like to offer three simple arguments for removing saving disincentives that are now in the tax code. First, people will save more if they are encouraged to save with an incentive that operates on every dollar of additional saving rather than an incentive like an IRA plan that allows individuals to take advantage of the tax saving offered simply by reallocating existing savings.

Second, I would argue that the United States has really never tried to increase aggregate savings with tax incentives or removal of tax disincentives. And finally, an attempt to encourage saving by enhancing after-tax returns to saving and increasing the after-tax cost of borrowing carries with it many attractive side benefits including deficit reduction, more affordable housing and a lower external deficit all of which deserve serious consideration.

I have tried to address one of the key issues surrounding tax incentives for saving in a research paper attached to my testimony. Essentially the paper examines the proposition that the way pension funding formulae are specified in the United States, imparts a downward bias to the measured responsiveness of saving to interest rates. Results obtained are supportive of the proposition that personal saving does respond positively to higher after-tax returns and are offered here as additional reason to consider attempting to induce more private saving by altering the tax treatment of income interest and expense.

Correcting the Tax Code for Anti-Saving Bias

It has long been recognized that the tax code distorts the tax treatment of interest income and expense in a way that saving is discouraged and over-borrowing is encouraged. These distortions rise with the inflation rate.

A proposal to correct the tax treatment of interest income and expense was included in the November 1984 Treasury Tax Reform Plan. The proposal was unnecessarily complex. A much simpler approach, call it "half interest tax and deduction" or

HITAD would help to correct the over-borrowing under-saving bias in the tax code by taxing one-half of interest income and allowing deduction of only one-half of all interest expense. The correction is very simple to apply, requiring only the insertion of "one-half" into a few lines of the tax code.

HITAD would raise the private saving rate, especially the currently low personal saving done by individuals. Individuals would get to keep more of the interest earned on every dollar of saving and so would save more. This incentive is superior to the IRA plan which induced savers simply to move already accumulated savings into IRA accounts. They saved on taxes but didn't increase overall saving. HITAD would reward every addition to saving with more after-tax interest.

HITAD would also discourage over-borrowing. Borrowing for everything from leveraged buyouts to speculative purchases of real estate would be discouraged at current interest rates with only half of the interest expense deductible. The $2 billion plus annual interest bill on the approximately $20 million of junk bond financing for the RJR Nabisco leveraged buyout, currently reduced by about $680 million a year, thanks to full interest deductibility and a 34 percent corporate tax rate, would be reduced by $340 million under HITAD. Taxes paid to the Treasury would rise by $340 million.

After HITAD was fully phased in the after-tax real cost of borrowing would be unaffected because more saving (lending) and less borrowing would mean lower market interest rates. With lenders and borrowers still agreed on an after-tax real interest rate of about 2 percent, a 12 percent pretax market rate under current tax law would drop to about 9.6 percent. (See Table 1)

Other Benefits of HITAD

America's trade deficit and foreign borrowing requirement would be cut by the HITAD proposal. About two-thirds of 1988's $135 billion in foreign borrowing as measured by our current account deficit results from an abnormally low personal saving rate and about one-third results from our budget deficit that is about $45 billion above its usual level of 2% of GNP. If the personal saving rate were raised to 6-1/2% of disposal income, its normal long-run level, the external borrowing of the United States would fall from $135 billion a year to just $45 billion per year. We would be on the road away from our current "Global Debtor" status.

HITAD would help cut the budget deficit in two ways thereby reducing even further our need to borrow from abroad. The revenue loss from not taxing half of interest income would be less than the revenue gained from eliminating half of interest deductions. The reason follows from the fact that much of

interest earning now accrues to pension funds that are already tax exempt while the interest expense deduction is heavily used as any follower of leveraged buyouts or high priced real estate knows. Capping the interest expense deduction at just half its current level would gain billions more in revenue than would be lost by taxing only half of interest income.

The second revenue gain from HITAD would come from the lower interest rates that it would induce and the resulting interest saving on the national debt. The Congressional Budget Office estimates that a 1 percentage point drop in interest rates produces a saving on interest outlays of $75 billion over five years. As is clear from Table 1, for inflation rates in the 4-6 percent range a reduction in market interest rates of 1-1/2 to 2% could be anticipated under HITAD. The result would be outlay savings over five years in the $100-$150 billion range.

HITAD DOES NOT PENALIZE HOME OWNERSHIP

One of the primary political impediments to the passage of HITAD is a feared vicious voter backlash since it would scare everyone with heavy mortgage payments. It needn't. The HITAD provision on mortgage payments could be phased in gradually over five years. As it becomes phased in interest rates would fall and existing homeowners with adjustable rate mortgage would benefit automatically while those with fixed rate mortgages could finance at lower rates.

HITAD would be especially helpful to first-time home buyers especially those who either are in lower tax brackets or do not itemize deductions. Lower interest rates and the slower rising home prices that would result from less demand for housing purely as a tax shelter would both contribute to more affordable housing.

This is just another way of saying that the use of the tax code to turn home ownership into a tax shelter pushes up the demand for housing and helps those who already own homes at the expense of those who do not. Since the value of homes and the rate of home ownership both rise with wealth, the tax breaks for housing that are usually portrayed as helpful to average Americans actually help the wealthy at the expense of those in the lower-middle income categories.

Lower interest rates would also help to avoid disruption in the housing market that now occurs when mortgage rates rise over 12 percent. At about that level there is a sharp drop in the number of households with cash flow sufficient to qualify for a mortgage on an average priced home. Home sales dry up. HITAD, by lowering to about 9.6 percent interest rates that under current tax law would average 12 percent would enable more people to qualify for mortgages during periods of tight money.

The fact is that HITAD would have relatively little impact on the after-tax cost of mortgages. Table 1 shows an array of interest rates under current law and under HITAD that would prevail for inflation rates ranging from 3 to 8 percent. Column 3 in Table 1 shows the reduction in monthly and annual mortgage costs under HITAD. At a 6 percent inflation rate with a drop of the market interest rate from 12 to 9.6 percent the annual reduction in outlays for a $100,000 mortgage would be $2,124. On an after-tax basis monthly interest payments for a $100,000 mortgage with a 6 percent inflation rate would rise only $21 assuming that none of the other beneficial effects of HITAD on savings rates and deficits would have any additional effect in pushing interest rates down.

HITAD leaves unaffected many existing preferences for owner-occupied housing including deferral of capital gains on principal residence, a one-time $125,000 exclusion from capital gains tax and the full deductibility of state and local taxes on owner-occupied residences.

Other Issues

Some observers have argued that restricting interest deductibility would place domestic investors at a disadvantage relative to foreign investors who have full interest deductibility. All else equal, this argument is true. But HITAD would reduce our external deficit and increase national saving thereby helping to strengthen the dollar. The primary reason for aggressive foreign buying of U.S. assets today is a very weak dollar. By encouraging domestic saving, it is by definition true that less capital inflows are required to finance our own investment. Other things equal, HITAD would strengthen the dollar and reduce foreign buying of U.S. property.

Beyond the benefits already mentioned, HITAD coupled with an end to the double taxation of dividends would go far toward quelling the wave of leveraged buyouts. Such leveraged buyouts are arranged primarily for the benefits of a very quick transformation of corporate balance sheets from equity to debt-liabilities. The instant tax-induced improvement in cash flow enhances the value of the property being bought out and encourages substitution of debt for equity.

Conclusion

If, as a nation we are serious about encouraging less spending and more saving and achieving all the desirable effects that go along with those changes, surely removing saving disincentives in the tax code should be high on the list among our policy proposals. Surely this alternative is preferable to seeking additional revenue through higher tax rates that, without HITAD would result in still higher interest rates and still more

demand for housing as a tax shelter. First-time home buyers and lower income Americans would be further squeezed by such developments.

Finally, a measure that would encourage saving by helping to reduce the budget deficit would have a double impact in increasing national saving. I invite the scrutiny of Ways and Means Committee Members and Staff of our study on Saving Behavior and Its Responsiveness to Interest Rates and would welcome estimation by the Joint Tax Committee and/or the Treasury Department of the impact of HITAD on the budget deficit.

TABLE 1

Inflation Interest Rates and Mortgage Costs

Inflation Rate	Current Law Effective Marginal Rate = 0.333[1] (interest rate in percent)	"Half Interest" Effective Marginal Rate = 0.167[1] (interest rate in percent)	Reduction on Monthly/Annual Mortgage Cost with "Half Interest" [2] (Dollars per $100,000 mortgage)	Rise in After-Tax Monthly interest Payments under "Half Interest"[2] (Dollars per $100,000 mortgage)
3	7.5	6.0	98/1176	33
4	9.0	7.2	124/1488	29
5	10.5	8.4	150/1804	25
6	12.0	9.6	177/2124	21
7	13.5	10.8	204/2448	17
8	15.0	12.0	231/2772	15

1. After-tax real interest rate set at 2 percent

2. Mortgage term set at 30 years

Joint Economic Committee: Hearing on Saving and Investment
June 21, 1989
Supplement to Testimony of:
John H. Makin
American Enterprise Institute

Alternative Individual Retirement Account Schemes

(Term: 30 Years; Rate of Return on IRA Account: 10%;
Tax Rate: 33%; Contribution of $2000 per year.)

CASE	IRA ACCOUNT BALANCE AT RETIREMENT
(1) Contribution and Accumulation Taxed	$205,952
	-----> Value of Tax-Free Accumulation:
	-----> $400,276 - $205,952 = $194,324
(2) Contribution Taxed; Accumulation Tax-Free	$400,276
	-----> Value of Deductible $2000 Contribution:
	-----> $501,715 - $400,276 = $101,439
(3) Contribution and Accumulation Tax-Free	$501,715

NOTES: (1) Value of tax-free withdrawl after 30 years in Case 2 = $132,091.
(2) Present value of tax-free withdrawl in Case 2 = $7,570.

CASE #1 $2000 CONTRIBUTION AND ACCUMULATION ARE TAXED

INTEREST RATE: 10%
PERIODS: 30
TAX RATE: 33%

PERIOD	BEGINNING BALANCE	CONTRIBUTION	INTEREST	TAXES	ENDING BALANCE
0	0	2,000	200	66	2,134
1	2,134	2,000	413	136	4,411
2	4,411	2,000	641	212	6,841
3	6,841	2,000	884	292	9,433
4	9,433	2,000	1,143	377	12,199
5	12,199	2,000	1,420	469	15,150
6	15,150	2,000	1,715	566	18,299
7	18,299	2,000	2,030	670	21,659
8	21,659	2,000	2,366	781	25,244
9	25,244	2,000	2,724	899	29,070
10	29,070	2,000	3,107	1,025	33,151
11	33,151	2,000	3,515	1,160	37,507
12	37,507	2,000	3,951	1,304	42,154
13	42,154	2,000	4,415	1,457	47,112
14	47,112	2,000	4,911	1,621	52,402
15	52,402	2,000	5,440	1,795	58,047
16	58,047	2,000	6,005	1,982	64,070
17	64,070	2,000	6,607	2,180	70,497
18	70,497	2,000	7,250	2,392	77,355
19	77,355	2,000	7,935	2,619	84,671
20	84,671	2,000	8,667	2,860	92,478
21	92,478	2,000	9,448	3,118	100,808
22	100,808	2,000	10,281	3,393	109,696
23	109,696	2,000	11,170	3,686	119,180
24	119,180	2,000	12,118	3,999	129,299
25	129,299	2,000	13,130	4,333	140,096
26	140,096	2,000	14,210	4,689	151,617
27	151,617	2,000	15,362	5,069	163,909
28	163,909	2,000	16,591	5,475	177,025
29	177,025	2,000	17,902	5,908	191,020
30	191,020	2,000	19,302	6,370	205,952

CASE #2 $2000 CONTRIBUTION TAXED; ACCUMULATION TAX-FREE

INTEREST RATE: 10%
PERIODS: 30
TAX RATE: 33%

PERIOD	BEGINNING BALANCE	CONTRIBUTION	INTEREST	TAXES	ENDING BALANCE
0	0	2,000	200	0	2,200
1	2,200	2,000	420	0	4,620
2	4,620	2,000	662	0	7,282
3	7,282	2,000	928	0	10,210
4	10,210	2,000	1,221	0	13,431
5	13,431	2,000	1,543	0	16,974
6	16,974	2,000	1,897	0	20,872
7	20,872	2,000	2,287	0	25,159
8	25,159	2,000	2,716	0	29,875
9	29,875	2,000	3,187	0	35,062
10	35,062	2,000	3,706	0	40,769
11	40,769	2,000	4,277	0	47,045
12	47,045	2,000	4,905	0	53,950
13	53,950	2,000	5,595	0	61,545
14	61,545	2,000	6,354	0	69,899
15	69,899	2,000	7,190	0	79,089
16	79,089	2,000	8,109	0	89,198
17	89,198	2,000	9,120	0	100,318
18	100,318	2,000	10,232	0	112,550
19	112,550	2,000	11,455	0	126,005
20	126,005	2,000	12,800	0	140,805
21	140,805	2,000	14,281	0	157,086
22	157,086	2,000	15,909	0	174,995
23	174,995	2,000	17,699	0	194,694
24	194,694	2,000	19,669	0	216,364
25	216,364	2,000	21,836	0	240,200
26	240,200	2,000	24,220	0	266,420
27	266,420	2,000	26,842	0	295,262
28	295,262	2,000	29,726	0	326,988
29	326,988	2,000	32,899	0	361,887
30	361,887	2,000	36,389	0	400,276

CASE #3 $2000 TAX-FREE CONTRIBUTION AND TAX-FREE ACCUMULATION

INTEREST RATE: 10%
PERIODS: 30
TAX RATE: 33%

	TAX FREE IRA					TAXABLE EXCESS					
PERIOD	BEGINNING BALANCE	CONTRIBUTION	INTEREST	TAXES	ENDING BALANCE	BEGINNING BALANCE	CONTRIBUTION	INTEREST	TAXES	ENDING BALANCE	TOTAL BALANCE
0	0	2,000	200	0	2,200	0	985	99	33	1,051	3,251
1	2,200	2,000	420	0	4,620	1,051	985	204	67	2,173	6,793
2	4,620	2,000	662	0	7,282	2,173	985	316	104	3,369	10,651
3	7,282	2,000	928	0	10,210	3,369	985	435	144	4,646	14,856
4	10,210	2,000	1,221	0	13,431	4,646	985	563	186	6,008	19,440
5	13,431	2,000	1,543	0	16,974	6,008	985	699	231	7,462	24,436
6	16,974	2,000	1,897	0	20,872	7,462	985	845	279	9,013	29,885
7	20,872	2,000	2,287	0	25,159	9,013	985	1,000	330	10,668	35,827
8	25,159	2,000	2,716	0	29,875	10,668	985	1,165	385	12,434	42,309
9	29,875	2,000	3,187	0	35,062	12,434	985	1,342	443	14,318	49,380
10	35,062	2,000	3,706	0	40,769	14,318	985	1,530	505	16,328	57,097
11	40,769	2,000	4,277	0	47,045	16,328	985	1,731	571	18,473	65,519
12	47,045	2,000	4,905	0	53,950	18,473	985	1,946	642	20,762	74,712
13	53,950	2,000	5,595	0	61,545	20,762	985	2,175	718	23,204	84,749
14	61,545	2,000	6,354	0	69,899	23,204	985	2,419	798	25,810	95,710
15	69,899	2,000	7,190	0	79,089	25,810	985	2,680	884	28,590	107,680
16	79,089	2,000	8,109	0	89,198	28,590	985	2,958	976	31,557	120,755
17	89,198	2,000	9,120	0	100,318	31,557	985	3,254	1,074	34,723	135,041
18	100,318	2,000	10,232	0	112,550	34,723	985	3,571	1,178	38,100	150,650
19	112,550	2,000	11,455	0	126,005	38,100	985	3,909	1,290	41,704	167,709
20	126,005	2,000	12,800	0	140,805	41,704	985	4,269	1,409	45,549	186,354
21	140,805	2,000	14,281	0	157,086	45,549	985	4,653	1,536	49,652	206,738
22	157,086	2,000	15,909	0	174,995	49,652	985	5,064	1,671	54,030	229,024
23	174,995	2,000	17,699	0	194,694	54,030	985	5,501	1,815	58,701	253,395
24	194,694	2,000	19,669	0	216,364	58,701	985	5,969	1,970	63,685	280,048
25	216,364	2,000	21,836	0	240,200	63,685	985	6,467	2,134	69,003	309,202
26	240,200	2,000	24,220	0	266,420	69,003	985	6,999	2,310	74,677	341,097
27	266,420	2,000	26,842	0	295,262	74,677	985	7,566	2,497	80,731	375,993
28	295,262	2,000	29,726	0	326,988	80,731	985	8,172	2,697	87,191	414,179
29	326,988	2,000	32,899	0	361,887	87,191	985	8,818	2,910	94,084	455,971
30	361,887	2,000	36,389	0	400,276	94,084	985	9,507	3,137	101,439	501,715

		DISPOSABLE PERSONAL INCOME	PERSONAL SAVINGS	SAVINGS AS % OF INCOME
Q1	1987	3125.9	138.4	4.428%
Q2	1987	3154.1	69.5	2.203%
Q3	1987	3224.9	72.6	2.251%
Q4	1987	3315.8	144.0	4.343%
Q1	1988	3375.6	149.9	4.441%
Q2	1988	3421.5	127.8	3.735%
Q3	1988	3507.5	145.7	4.154%
Q4	1988	3582.5	153.8	4.293%
Q1R	1989	3696.0	214.5	5.804%

SOURCE: BEA GNP MONTHLY REPORT.

SAVING, PENSION CONTRIBUTIONS, AND THE REAL INTEREST RATE

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This paper tests the hypothesis that empirical estimates of the interest elasticity of personal and private saving may be biased downward by a failure to control for behavior related to defined benefit pension programs. Questions related to the level of the U.S. national saving rate, while important, are treated elsewhere. See Makin, (1986) and Summers and Carroll (1987).

In one of the most widely cited studies of private saving, Michael Boskin (1978) reported a substantial positive interest elasticity of private saving on the order of 0.4. Lawrence Summers (1981) employed Boskin's results, along with a life-cycle model of aggregate saving behavior, to infer implied interest elasticities of U.S. saving, ranging from 0.74 to 3.71. Reacting to the Boskin and Summers estimates, Friend and Hasbrouck (1983) undertook an empirical study of private saving and reported that "there is little scientific justification for the recent literature purporting to show a positive interest elasticity of saving, so that government tax policies predicated on such saving behavior rest on a dubious foundation."

The interest elasticity of saving is a crucial variable in estimating the welfare gain associated with the elimination of capital income taxation or, equivalently, with the adoption of a consumption tax. More responsiveness to the price of future consumption (the inverse of the interest rate) translates into more saving, investment and output after a tax on consumption replaces the income tax. Summers' (1981) estimates of such welfare gains are sensitive to the assumed interest elasticity of saving. Fullerton, Shoven and Whalley (1983) report that dynamic welfare gains obtained by replacing the

personal income tax with a progressive consumption tax more than double when the assumed saving elasticity rises from 0 to 2.

Measurement of the interest elasticity of saving has become closely tied to the impact of changes in interest rates upon unfunded liabilities of defined benefit pension programs. Bernheim and Shoven (1985) have shown that defined benefit pension contracts are equivalent to a classic target saving case. Higher real returns on assets reduce unfunded liabilities of such plans, and thereby reduce contributions necessary to meet the funding target. A rise in real interest rates coupled with a rise in equity values and slower wage increases, such as occurred during the 1980s, have reduced sharply unfunded liabilities in defined benefit pension plans and also reduced contributions to those plans. The result is to couple a rise in real interest rates with a reduction in measured personal saving. Whether or not the pension funding effect upon personal saving is offset elsewhere on a full national balance sheet remains an empirical question that will be investigated further in this study.

Significant problems remain related to the measurement of saving described by Blades and Sturm (1982), Boskin and Roberts (1986), and others. Uncertainty about the theoretical sign of the interest elasticity of saving discussed by Van Wijenbergen (1983), Starrett (1986), and Gupta (1987) adds to the difficulty by denying investigators a refutable hypothesis with which to confront the data. The use of time series data to investigate saving behavior is complicated; under the life-cycle hypothesis aggregate saving rates ought to vary over time due to demographic changes.

In spite of these difficulties and in view of the implied bias on the measured interest elasticity resulting from pension contributions, it is useful to reexamine aggregate saving behavior while attempting to control for the pension contribution phenomenon.

1. The Model

The model estimated is given by

$$S_t = a_o + a_1 YP_t + a_2 YT + a_3 r_t - a_4 pfe + e_t \qquad (1)$$

$$a_i \ (i = 0 \ldots 4) > 0$$

where "t" is time, S is real per capita private or personal saving (see discussion below), YP is permanent per capita real income, YT is transitory per capita real income, r is the expected real interest rate, pfe is the pension funding effect described by Bernheim and Shoven (1985), and e_t is an error term. Full details on these variables are provided below in the footnote to Table 1.

The theory of saving underlying this model is based upon analysis of the intertemporal allocation of consumption by utility-maximizing consumers pioneered by Fisher (1907), Ramsey (1928), and Hicks (1939). Households or firms spend or save out of current income based on a desire to maintain a smooth path of consumption relative to some long-run notion of its ability to support a given level of consumption. The separation of consumption and current income was articulated in a life-cycle context by Ando and Modigliani (1963). The relation of consumption to an underlying notion of wealth was developed by Friedman (1957) whose permanent income hypothesis represented an attempt empirically to implement a measure of wealth based on an exponentially declining weighted average of past measures of income.

The hypothetical signs of the coefficients are straightforward. Higher permanent income and higher transitory income increase saving. A higher expected real interest rate will raise saving provided that substitution effects outweigh wealth/income effects. The pension funding effect will depress measured personal saving. It will also depress measured private saving provided that all of the change in pension funding does not go into retained earnings. (See discussion below.) Finally, the omission of pfe from equation (1) ought to bias downward the estimated interest rate coefficient, a_3. (See discussion below.)

2. Measurement

Estimation of a saving equation like (1) amounts to testing a joint hypothesis. The final equation is estimated conditional on hypotheses concerning measurement of permanent income or wealth, transitory income and the real rate of interest faced by savers. All are unobservable variables. More obvious but just as important is the maintained hypothesis that saving itself is being properly measured.

Personal saving (the residual NIPA measure) and private saving (personal saving plus retained earnings with inventory valuation and capital consumption adjustment) each measured in real per capita terms, are employed as dependent variables in this study. Primary focus is upon personal saving that ought to be sensitive to the pension funding effect. If all of the reduction of required pension funding when interest rates rise goes into corporate retained earnings, the overall effect on private saving -- the sum of personal saving and retained earnings -- ought to be zero. If, however, some of the reduced pension contribution is employed to finance investment or dividends, the net

effect on private saving will be negative.[1] Therefore, the estimated interest rate coefficient on private saving may also be biased downward. Still, the estimated interest rate coefficient in the private saving equation ought to be smaller that the same coefficient in the personal saving equation since the pension funding effect on corporate saving will be zero or negative.

The scalar in our saving equation is a measure of permanent income derived from a time series model of NIPA disposable personal income.[2] As it turns out, disposable personal income is a random walk with drift and so our measure of permanent income is simply lagged measured income with a constant added.[3] This finding, consistent with the finding by Nelson and Plosser (1980) that most economic aggregates are difference stationary processes, suggests that the long distributed lags employed to measure permanent income by Friedman (1957) and Friend and Hasbrouck (1983) included many redundant lagged values of income on the right hand side of their equations. It is consoling to note that our simple flow proxy for wealth is highly correlated (ρ=0.96) with the FOF measures of household net worth. Another bonus from the time series modeling approach to measurement of a flow proxy for wealth is that the white noise residuals serve as a measure of purely random deviations from permanent income.

The interest rate has attracted the most attention among the variables employed to explain saving. A higher real interest rate lowers the relative price of future goods embodied in the durable real or financial assets acquired by the saver. Therefore, the substitution effect is positive.

The wealth effect is ambiguous since a change in the interest rate may transfer wealth between populations with different saving propensities. Prospective net borrowers (the young) experience a loss in wealth when interest rates rise, while prospective net lenders (the old) experience a wealth gain. The net effect on measured saving depends on how numerous and how wealthy (the weights in aggregate saving) the members of each group are and what their saving behavior is. If prospective net borrowers, who experience a wealth loss as interest rates rise, dominate -- as they will in an open debtor economy like the United States since 1986 -- the net wealth effect on saving is negative.[4] In such a case the net impact upon saving of a rise in interest rates is ambiguous, since the positive substitution effect and the negative wealth effect operate in opposite directions.

Pension funds comprise the largest group of prospective net lenders in the United States. Yet pension funds act like target savers and as such respond to higher interest rates as would prospective net borrowers. The unfunded liabilities of defined benefit pensions are calculated as the present value of the fund's obligations less assets in the fund. The present value of obligations is calculated as a stream of annuities, dependent on growth of wages, turnover and other factors, discounted at an assumed interest rate. As market interest rates rise, a higher return on assets enables defined benefit pension plans to meet target funding levels with lower contributions. Effectively, future obligations can be discounted at a higher rate. Therefore corporate pension contributions, a large portion of personal saving, can be reduced.

This view of pension funding suggests that if it is ignored, the estimated response of personal and, possibly, of private saving to interest rates will be biased downward and may be negative. In order to estimate properly the unconstrained coefficient measuring the responsiveness of saving to interest that is relevant to measuring gains from the shift to a consumption-based tax, it is necessary to control for the target saving behavior of pension funds.

As a measure of what shall be termed the "pension funding effect" (pfe), we employ a simple monotonically increasing dummy variable beginning in January of 1980, the period that according to Bernheim and Shoven (1985) coincides with emergence of a rising share of Fortune 500 companies whose assets equal or exceed accrued, vested pension benefits. As that share rises, the share of companies whose pension funds are at or above funding targets rises and therefore contributions, a large share of personal saving, fall. If the pfe is positively correlated with interest rates, as it is in our sample, the coefficient on the interest rate in a saving equation is negatively biased.

The expected real interest rate is estimated as the nominal yield on U.S. Treasury securities at a constant maturity of one year less the 12-month inflation forecast from the Livingston Survey data on inflationary expectations.[5,6] An attempt to adjust the expected real interest rate for taxes was unsuccessful. Quarterly time series data on effective marginal tax rates on interest income are unavailable. It is consoling to note that annual 1955-82 estimates of such tax rates suggest that they are relatively stable over the 1953-85 sample period.[7]

3. Estimation

This section presents results of estimating equations describing real per capita U.S. personal and private saving. Equations are estimated using quarterly data drawn from the sample period running from 1953.2-1985.4. The sample includes the period after 1982 during which the rate of personal saving, about 40 percent of private saving, fell sharply.

The model underlying the estimated personal and private saving equations is given by equation (1). The saving equation includes a wealth term and a transitory income term, both positively related to saving. Additional explanatory variables include a real interest rate and a measure of pension overfunding, pfe, described above. An instrumental ex ante real interest rate is estimated employing a univariate time series model. Separate equations for the instrumental interest rate XANFIT were estimated for each sample period.[8]

The results of stage two estimates of personal saving equations employing the XANFIT interest rate are presented in Table 1. The personal saving equations are estimated over three sample periods. The full sample, 1953.2-1985.4, the first subperiod, 1953.2-1979.4, and the second subperiod, 1980.1-1985.4. The first subperiod excludes the period over which the pension funding effect is identified in the data employed by Bernheim and Shoven (1985). Also, it is comparable to the 1952-80 sample period employed by Friend and Hasbrouck (1983) to investigate private saving behavior. The second subperiod coincides with the period over which the pension funding effect should operate.

A Chow test was performed to test the hypothesis that observations in the second subperiod came from the same relationship as the first

subperiod with the pension funding effect omitted from both periods. The resulting $F=16.60 > [F^{.01}_{4,123} = 3.47]$ indicated decisive rejection of the hypothesis for personal saving. [The same hypothesis was rejected for private saving (F= 10.4).]

For the estimated equations, the wealth and transitory income terms are significant with anticipated positive signs. The only exception is the second subperiod equation omitting the pension funding effect, a purposely mis-specified equation.

The most interesting results emerge from comparison of the second subperiod equations estimated with and without the pension funding variable. [See equations (1.6) and (1.7).] Without the pension funding variable, the overall fit is poor with an insignificant coefficient on the interest rate and wrong or insignificant signs on wealth and transitory income variables. Addition of the pension funding variable greatly improves the fit. Coefficients on wealth and transitory income terms become significant and take on the right signs. The interest rate term becomes positive and highly significant while the pension funding term carries the anticipated negative sign. The implied elasticity of saving with respect to expected real interest is 0.28.

The results for the full sample [equations (1.1) and (1.2)] are not so sensitive to inclusion of the pension funding effect as are results for the second subperiod. The pension funding effect operates much the same in both periods but the estimated interest rate effect is smaller (implied elasticity = 0.04) and only marginally significant. For the first subperiod [equation (1.4)] during which the pension funding effect is inoperative, the interest rate term is not significantly different from zero.

Taken altogether, the personal saving results suggest that during the 1953-79 subperiod either offsetting wealth effects accompanied changes in real interest rates or other exogenous factors affected personal saving. A monotonically increasing dummy variable starting in 1953.2 for both the 1953-79 subperiod and the full sample [equation (1.3) and (1.5)] is significant with a negative sign, but fails to yield a significant interest rate term. The monotonically increasing dummy variable starting in 1980.1 appears to control better for negative wealth effects than does a monotonically increasing dummy variable starting in 1953.2.

The second subperiod results may reflect consistently negative wealth effects, captured by the pension funding dummy variable that operated more uniformly during the 1980s than during the 1953-79 period. The steady post-1980 rise in the United States' external indebtedness (from +$141 billion in 1981 to -$112 billion in 1985) and the baby boom-generated rise in the share of the prospective-net-borrower population aged 22-39 (from 28.3 percent in 1980 to 30.4 percent in 1985) both indicate enhanced negative wealth effects associated with a rise in real interest rates. Neither phenomenon operated consistently during the 1953-79 sample period.

Private saving equations estimated over the full period and the first subperiod, close to the Friend and Hasbrouck 1952-80 sample, yield conclusions similar to their results concerning the interest sensitivity of private saving. (See Table 2.) During the full sample period with the pension funding dummy variable in place from 1980.1-1985.4, although the dummy captures a significant negative

pressure on private saving during that period, the estimated coefficient on the interest rate term XANFIT is almost zero.

Addition of the pension funding effect to a private saving equation for the 1980.1-1985.4 subperiod improves the fit. The pension funding effect is highly significant with a negative sign. The interest rate term is positive but only marginally significant (t=1.13). The implied elasticity is 0.04, considerably below the elasticity of 0.28 in the personal saving equation. These values are consistent with the hypothesis that the business portion of private saving is unaffected by the pension funding effect so that the impact, concentrated on personal saving is muted in a private saving aggregate that includes personal saving.

The private saving results, taken in conjunction with personal saving results, suggest that the pension funding effect together with negative wealth affects tied to higher real interest rates may have depressed personal and private saving during the 1980s. The implied bias on the estimated sensitivity of saving to real interest is more pronounced in the personal saving equation, although inclusion of the pension funding effect in the private saving equation during the 1980s does result in estimation of a marginally significant (t=1.13) positive interest rate term.

4. Summary and Conclusions

This study finds that target saving behavior implied by funding formulae for defined benefit pension plans, as described by Bernheim and Shoven (1985), biases downward the estimated interest elasticity of personal and, possibly, of private saving. Such bias is especially

likely to be present in post-1980 sample periods, since it is during that period that higher real interest rates have been associated with large reductions in required contributions to defined benefit pensions.

Correcting for the pension-funding bias, the implied interest elasticity of private saving is found to be 0.04, well below Boskin's (1978) estimate of 0.4 obtained with a different data set and different estimation procedures. The implied interest elasticity of personal saving is 0.28. Still, the finding of a low (0.04) marginally significant interest elasticity of private saving suggests a need for further investigation of the claim by Friend and Hasbrouck (1983) that there exists little scientific support for the positive interest elasticity of private saving.

The results reported here while suggestive are not conclusive. Failure to reject the hypothesis that some monotonically increasing variable has over a 1980-85 sample period depressed personal/private saving does not prove the pension funding hypothesis.

Two other events during this sample period may have operated to depress saving through negative wealth effects that were in turn directly linked to sharply higher real interest rates since 1980. The United States' net external indebtedness has risen steadily since 1980. So too has the share of the population aged 22-39 likely to be prospective net debtors and thereby subject to negative wealth effects given a sharp rise in real interest rates. Efforts to link these factors to lower saving rates have so far proved inconclusive but further investigation is deemed worthwhile.

Notes

1. The use by firms of reduced pension funding contributions when interest rates rise to finance more investment may be prudent. Pension funding formulae are set as if changes in asset values or interest rates are permanent. If such changes are reversed, a firm may be well advised to have accumulated additional real capital to yield higher future earnings with which to satisfy possible higher future pension claims.

2. National income would be a more appropriate scalar for private saving, but since it is almost perfectly correlated ($\rho = 0.99$) with disposable personal income the latter is used to estimate permanent income in both saving equations.

3. Specifically for the full sample (1953.2 - 1985.4):

$$Y^P_t = \underset{(5.15)}{35.121} + Y_{t-1} + E_t$$

For the first subperiod (1953.2 - 1979.4):

$$Y^P_t = \underset{(4.83)}{34.033} + Y_{t-1} + E_t$$

For the second subperiod (1980.1 - 1985.4), an AR(1) process provided the best fit:

$$Y^P_t = \underset{(3.65)}{690.93} + \underset{(51.81)}{0.93237} \cdot Y_{t-1} + E_t$$

4. See further discussion in Makin (1986).

5. The Livingston survey is conducted twice a year in April and October. Average one-year nominal rates in the second and fourth quarters are aligned with the April and October inflationary expectations. First and third quarter real rates are estimated by linear interpolation.

There is no unambiguously superior measure of inflationary expectations. However, tests of the Livingston survey data for consistency with rationality reveal no strong presumption that it

constitutes a biased measure of in-sample inflation expectations. See Pearce (1979). Also, see Zarnowitz and Lambros (1987) for a thorough discussion of the relationship between Livingston survey data and other inflation forecasts.

6. Gupta's (1987) approach employing separate terms for expected inflation and the nominal interest was not employed since our main objective is to test for the impact of the pension funding effect upon the real interest elasticity of saving.

7. See Tanzi (1980).

8. The results for the sample periods discussed below were various ARMA models. For each Box Pierce-Ljung Q-statistics for 12 autocorrelations indicated purely random residuals.

	Full Sample			First Subperiod		Second Subperiod	
	w/ dummy	w/o dummy	w/ full period dummy	w/o dummy	w/ full period dummy	w/ dummy	w/o dummy
Sample Range	1953.2 - 1985.4			1953.2 - 1979.4		1980.1 - 1985.4	
Equation #	1.1	1.2(1)	1.3	1.4	1.5	1.6	1.7
Permanent Income/ Wealth	0.12	0.40	0.42	0.12	0.46	0.10	-0.19
T-Stat	5.92	5.04	4.97	4.38	5.12	1.57	-3.03
Transitory Income	0.45	0.58	0.60	0.45	0.64	0.54	0.03
T-Stat	9.88	10.60	10.30	9.37	10.36	3.52	0.17
Monotonically Increasing Dummy	-19.45	--	-17.40	--	-16.19	-19.95	--
T-Stat	-4.59	--	-3.07	--	3.75	-5.65	--
Real Interest/ XANFIT	7.67	5.15	5.55	6.10	-2.13	37.30	16.60
T-Stat	1.21	0.86	0.91	0.74	-0.26	4.07	1.24
Constant	-374.71	-14.33	-1679.00	-360.07	-2037.25	-354.48	2479.60
T-Stat	-2.32	-2.80	-3.45	-1.67	-4.46	-0.55	3.89
AR(1)	0.81	--	0.95	0.87	0.88	--	--
T-Stat	14.51	--	23.69	15.24	16.91	--	--
SAR(1)	--	--	--	--	-0.23	--	--
T-Stat	--	--	--	--	-2.16	--	--
Span	--	--	--	--	9	--	--
Adj R2	0.89	0.49	0.89	0.91	0.93	0.72	0.28
SEE	49.13	48.92	48.24	45.43	42.38	56.75	90.60
F	206.90	41.75	215.60	270.90	211.80	15.71	4.04
Q12	11.69	8.81	9.46	15.08	5.24	10.09	21.73
P	0.39	0.72	0.58	0.18	0.87	0.61	0.04

(1) Estimated in first differenced form.

Footnote attached to Table 1

Personal Saving, National Income and Product Accounts (NIPA), Bureau of Economic Analysis (BEA), Department of Commerce.

Private Saving, Personal Saving plus retained earnings with inventory valuation and capital consumption adjustment, NIPA, BEA, Department of Commerce.

Disposable Personal Income, NIPA, BEA, Department of Commerce.

Implicit Price Deflator, NIPA, BEA, Department of Commerce.

Population, NIPA, BEA, Department of Commerce.

Ex ante Real Rate of Interest calculated as:

$$([(1 + i_t)/(1 + pi_t)] - 1) \cdot 100$$

where pi_t = 12 month inflation forecast from the Livingston Survey provided by the Federal Reserve Bank of Philadelphia.

and i_t = yield on treasury securities at constant maturity of 1 year, Federal Reserve Bulletin.

To compute the ex ante rate, the April and October observations of the T-Bill rate are used to match the timing of the Livingston Survey. Alternative quarters are computed as a linear interpolation.

Actual Series Available Upon Request

	Full Sample		First Subperiod	Second Subperiod	
	w/ dummy	w/o dummy	w/o dummy	w/ dummy	w/o dummy
Sample Range	1953.2 - 1985.4		1953.2 - 1979.4	1980.1 - 1985.4	
Equation #	2.1	2.2	2.3	2.4	2.5
Permanent Income/ Wealth	0.24	0.20	0.24	0.32	0.12
T-Stat	18.71	11.19	14.47	5.26	1.74
Transitory Income	0.52	0.49	0.57	0.73	0.24
T-Stat	10.30	9.84	10.21	4.01	1.14
Monotonically Increasing Dummy	-12.63	--	--	-14.84	--
T-Stat	-4.03	--	--	-4.03	--
Real Interest/ XANFIT	0.01	-4.18	-0.91	14.31	-2.83
T-Stat	.00	-0.58	-0.10	1.13	-0.14
Constant	-363.85	-116.55	-358.27	-1211.89	659.29
T-Stat	-3.54	-0.77	-2.73	-2.00	0.88
AR(1)	0.74	0.85	0.75	--	--
T-Stat	11.51	15.19	10.90	--	--
SAR(1)	--	--	--	-0.60	-0.65
T-Stat	--	--	--	-1.98	-1.76
Span	--	--	--	4	4
SMA(1)	0.23	0.23	--	--	--
T-Stat	2.43	2.40	--	--	--
Span	4	4	--	--	--
Adj R2	0.97	0.97	0.97	0.73	0.41
SEE	54.55	57.06	51.89	58.13	85.27
F	730.40	798.80	895.60	10.40	3.92
Q12	13.36	16.76	18.15	14.57	32.20
P	0.20	0.08	0.08	0.20	.00

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Representative HAMILTON. OK. Thank you, Mr. Makin.
Mr. Steuerle, please proceed.

STATEMENT OF C. EUGENE STEUERLE, PRESIDENT, GOVERNMENT FINANCE AND BUDGET INSTITUTE

Mr. STEUERLE. Thank you, Mr. Chairman. As you suggest, I'll summarize my prepared statement and provide the text for the record.

This committee is to be commended not only for this hearing but for its efforts over the years to examine ways in which saving and investment affect economic growth.

Government policies do affect growth in the economy. The way the Government organizes and designs its expenditures and taxes, as well as the ways in which it promotes and impedes competitive conditions in the market place, are probably the most important influences that it exerts on economic growth.

By the same token I should make clear that most studies have shown little or no connection between adoption of a saving or investment incentive and the generation of economic growth.

Growth is generated primarily by hard work, by inventiveness, innovation, technological change, the generation of new ideas and the application of superior methods. There is so simple solution to the issue of how to generate growth.

As economic coordinator of the Treasury's tax reform effort, I proceeded on the theory that uniform treatment of capital income would foster long-term growth by reducing discrimination against new business, by channeling funds more directly to activities with the greatest economic returns, and by eliminating the distortions created by growing and widespread use of shelters.

As you may remember, Mr. Chairman, there was a loud outcry at the time arguing that there would be a short-term deleterious effect on the economy and that the economy would suffer greatly from the enactment of tax reform. In fact, what happened was that after the enactment of reform, the economy has proceeded to benefit from growth rates that in many ways are unprecedented for this stage of an economic recovery.

Now I do not want to argue that one example in any way proves the validity of the reform model, but it certainly does call into disrepute the exaggerated claims often made with respect to the enactment of elimination of savings or investment incentives.

It's probably worth examining why saving and investment incentives in the past have failed. Practically all saving and investment incentives in the past have aimed at creating new wealth in society by promising people with current wealth a means to subsidize or maintain and increase that wealth. Excluded from this subsidized market were often new market participants and new businesses, including young households seeking their first house and middle-class individuals with new ideas and inventions trying to open new business. In fact, these individuals were put at a competitive disadvantage by these saving and investment incentives.

Attempts by governments to favor particular items of investments have proven to be notorious failures. Among the best examples of failure are those Socialist or Communist governments that

believed they could generate growth by subsidizing, often at a rate of 100 percent, large amounts of investment in particular items of physical capital.

The United States recently went through a period of stagnation in which the rates of gross investment and rates of growth in the supply of labor were often as high, if not higher, than in previous periods. Again it seems to me, Mr. Chairman, that this argues that stagnation was caused mainly by the misallocation and not by the supply of total resources.

Among the reasons that savings incentives have failed is that they have often not applied to new savings; they have allowed tax saving to be generated through asset shifting, that is, the movement of capital from one account to the other; and they have not applied equally to negative saving or borrowing.

Mr. Makin has spoken, I think, quite well to the problem on the borrowing side of the ledger.

Suppose one even takes the most optimistic view of the responsiveness of taxpayers to savings incentives and ignores all of the design features, the poor design features, that usually accompany these purported incentives. Even then, such incentives typically cost the taxpayer more than they generate in net saving to the economy. In other words, if we are very lucky, Mr. Chairman, if we follow all of the right design features, we might get 40 cents of private saving for a decline in public sector saving of a dollar.

As a society, we seem not to be saving less, but to be borrowing more. In more precise terms, the supply of gross savings and loanable funds does not seem to have decreased so much but these funds have been used more to borrow for consumption than to finance new investment.

What can be done in this type of world?

Like many economists, I tend to favor a decrease in the Federal deficit. This is probably the best means of attempting to increase our national saving. My reason for favoring a reduction in the deficit, however, is primarily that it would represent sound budget policy. It would give us a much greater ability to change budget priorities over time to meet needs that are current, as opposed to allocating increased portions of expenditures in interest payments on the debt. A smaller deficit would also likely result in lower real interest rates, thereby providing some additional benefits to the economy.

I should indicate my skepticism, however, Mr. Chairman: the net effect on domestic investment is still uncertain.

There is no substitute for doing things right. While reduction in the budget deficit is an important goal, it is hardly a prescription for future growth. If reduction in the budget deficit is attained at the cost of poor expenditure policy or poor tax policy, then it is quite probable that the growth rate of the economy will be reduced, not increased.

One means of reducing the deficit in a way that is consistent with both expenditure and tax policy principles is to provide for greater funding of government insurance. In effect, there should be increased reliance on pay-as-you-go mechanisms that reduce the amount of private funding and saving that would be associated with the private provisions of similar insurance.

As Mr. Makin again has pointed out, we have less reason than ever to subsidize borrowing through our tax system. Regardless of its effect on net saving—and I do think there would be a modest effect—this subsidy for borrowing encourages inefficient patterns of asset ownership, financial intermediation and encourages debt over equity financing.

Reduction of some of the tax subsidy for borrowing would again also tend to lower interest rates, leading to other beneficial effects for the economy.

In the modern world, it has become more difficult than ever to distinguish between investment in human capital and investment in physical capital. Our saving and investment figures are misleading because they measure only the latter. Investments in education and training are as important, if not more important, than ever before, and I strongly support the efforts of both the administration and the Congress to give renewed attention to these investments in long-term growth.

And finally, Mr. Chairman, like education, research is an area where evidence still tends to a point to a high rate of return to society and where some government involvement is justified. I would also like to encourage this committee or other Members of Congress to continue to examine ways in which the research budget affects growth and, moreover, to give comprehensive treatment to such an analysis, including the ways in which we sponsor research through the defense budget, through R&D investment tax credits, and through a variety of other devices.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Steuerle follows:]

PREPARED STATEMENT OF C. EUGENE STEUERLE

SUMMARY

1. Growth is generated primarily by hard work, inventiveness and innovation, technological change, the generation of new ideas, and the application of superior methods.

2. As economic coordinator of the Treasury's initial tax reform effort, I proceeded on the theory that uniform treatment of capital income would foster long-term growth by reducing the discrimination against new business, by channeling funds more directly to those activities with the greatest economic returns, and by eliminating the distortions created by the growing and widespread use of tax shelters. At the time, opponents argued that substitution of lower rates for investment and saving incentives would have short-term deleterious consequences for the economy. After the enactment of tax reform, however, the economy proceeded to benefit from near-term growth rates that were unprecedented for this stage of a recovery. One example does not prove the validity of the reform model, but it does call into disrepute the exaggerated claims often made with respect to the enactment, or elimination, of saving and investment incentives.

3. Practically all saving and investment incentives have been aimed at creating new wealth in society by promising people with current wealth a means to maintain or increase that wealth. Excluded from this subsidized market were many new market participants and new businesses, including families looking for their first homes and middle-class individuals with new ideas or inventions. In fact, both groups typically were put at a competitive disadvantage.

4. Attempts by governments to favor particular items of investment have proven to be notorious failures. Among the best examples of failure are those socialist or communist governments that believed that they could generate growth simply by subsidizing, sometimes at a rate of 100 percent, large amounts of investment in physical capital.

5. The United States recently went through a period of stagnation in which the rates of gross investment and growth in the supply of labor were as high or higher, not lower, than in previous periods. Stagnation was caused mainly by the misallocation, not the supply, of total resources. Tax and loan policies, including past investment incentives, actually contributed to this stagnation.

6. Among the reasons that saving incentives have failed is that they often have not applied to new or marginal saving; they have allowed tax saving to be generated through asset shifting; and they have not applied equally to negative saving or borrowing.

7. Suppose one takes the most optimistic view of the responsiveness of taxpayers to saving incentives, and ignores the poor design features of almost all purported incentives. Such incentives still cost the taxpayer more than they generate in net saving to the economy. In other words, if lucky, we might get 40 cents of private saving for a decline in public sector saving of one dollar.

8. As a society, we seem not to be saving less, but to be borrowing more. More precisely, the supply of gross saving and loanable funds has not decreased, but those funds have been borrowed less to finance net new investment, and more to support current activities and consumption.

What Should Be Done?

9. Like many economists, I tend to favor a decrease in the federal deficit. This is probably the best means of attempting to increase our national saving. My reason for favoring a reduction in the deficit, however, is primarily that it would represent sound budget policy. It would give us a much greater ability to change budget priorities over time to meet needs that become current, as opposed to allocating increased portions of expenditures to interest payments on debt. A smaller deficit would also likely result in lower real interest rates, thereby providing some additional benefits to the economy. The net effect on domestic investment is much more uncertain.

10. There is no substitute for "doing things right." While reduction of the budget deficit is an important goal, it is hardly a prescription for future growth. If reduction of the budget deficit is attained at the cost of poor expenditure policy and poor tax policy, then it is quite probable that the growth rate of the economy will be reduced, not increased.

11. One means of reducing the deficit in a way that is consistent with both expenditure and tax policy principles is to provide for greater funding of government insurance. In effect, there should be decreased reliance on pay-as-you-go mechanisms that reduce the amount of private funding (and saving) that would be associated with the private provision of similar insurance.

12. We have less reason than ever to subsidize borrowing through our tax system. Regardless of the effect on net saving, this subsidy for borrowing encourages inefficient patterns of asset ownership, financial intermediation, and debt over equity financing. Reduction of some of the tax subsidy for borrowing would also tend to lower interest rates, leading to other beneficial effects for the economy.

13. In the modern world, it has become more difficult than ever to distinguish between investment in human capital and investment in physical capital. Our saving and investment figures are misleading because they measure only the latter. Investments in education and training are as important, if not more important, than ever before, and I strongly support the efforts of both the Administration and the Congress to give renewed attention to these investments in long-term growth.

14. Like education, research is an area where evidence still tends to point to a high rate of return to society and where some government involvement is justified. If members of this Committee continue to examine the ways in which the government attempts to foster growth, I encourage them to review public and private research financed or subsidized by the U.S. Government. In this light, someone should begin a review of how the research budget might be reallocated in a world in which defense expenditures, even under the Administration's request, apparently are going to decline as a percentage of GNP. If, God willing, the Cold War continues to thaw, there may be significant and fundamental implications and opportunities for U.S. research and development that should be investigated.

Mr. Chairman and Members of the Committee:

I am pleased to have this opportunity to testify before this Committee on issues related to saving and investment.

Investment is an essential part of economic growth. It is one means by which a society insures a tomorrow in which there is more output to be enjoyed by everyone. This committee is to be commended for its current efforts, as well as its leadership over the years, in examining saving and investment and their relationship to economic growth. Government policies do affect growth in the economy. The way the government organizes and designs its expenditures and taxes, as well as the ways in which it promotes or impedes competitive conditions in the marketplace, are important influences on economic growth. By the same token, most studies have shown little or no connection between adoption of a saving or investment incentive and the generation of economic growth.

There are several reasons for the failure of past government incentives. Growth is generated primarily by hard work, inventiveness and innovation, technological change, and the generation of new ideas and the application of superior methods. No simple saving or investment incentive, even if it does increase capital, is going to substitute for those factors. Simply throwing money at physical capital, and compensating by raising taxes on returns to human capital and labor, does not eliminate the need for such factors as creativity and innovation. A separable issue is whether such an incentive would increase the stock of capital in the first place.

Innovation and technological change also require investment, investment in people and their education. They require competitive markets whereby those with the best ideas have at least a good chance of competing for the financing necessary to begin operations. In the modern world, it has become more and more difficult to distinguish between investment in human capital and investment in physical capital. Our saving and investment figures are misleading because they measure only the latter.

In that respect, it should be clear that for a given level of government expenditures, reducing taxes on one group of taxpayers simply results in an increase in taxes on other taxpayers, either today or tomorrow. Since all taxes are distorting, there is no doubt that reducing taxes, if it could be done entirely in isolation from everything else in the economy, would result in an improvement in efficiency in the economy. But it simply can't be done in isolation.

As economic coordinator of the Treasury's initial tax reform effort, I proceeded on the theory that uniform treatment of capital income would foster long-term growth by reducing the discrimination against new business, by channeling funds more directly to those activities with the greatest economic returns, and by eliminating the distortions caused by the growing and widespread use of tax shelters. At the time, opponents argued that elimination of investment and saving incentives would have short-term deleterious consequences for the economy. Since the enactment of tax reform, however, the economy has benefited from near-term growth rates that were unprecedented for this stage of a recovery. One example does not prove the validity of the

reform model, but it does call into disrepute the exaggerated claims often made with respect to the enactment, or elimination, of saving and investment incentives.

At the time of tax reform, this country was spending tens of billions of dollars on saving and investment incentives without demonstrating any marked effect on economic growth. Some of the reasons for this failure are worth examining.

Most of these incentives discouraged competition. Past saving and investment incentives aimed at creating new wealth in society by promising people with current wealth a means to maintain or increase that wealth. Excluded from this subsidized market were many new market participants and new businesses, including families looking for their first homes and middle-class individuals with new ideas or inventions. In fact, both groups typically were put at a competitive disadvantage.

Even today, these groups remain at a competitive disadvantage. Why? Tax deductions and credits are of benefit mainly to those who have positive taxes, who have already been successful at some other venture. A start-up business seldom can use all tax benefits immediately even when it is immediately profitable. The problem is even worse when investment incentives are added. In the pre-1987 world, for instance, the flow of output from a piece of profitable equipment initially would yield less than half of the necessary receipts to take full advantage of the investment subsidies. Hence, only firms that were already profitable could make full use of the subsidies.

The Failure of Investment Incentives

Attempts by governments to favor particular items of investment have proven to be notorious failures. Among the best examples of failure are those socialist or communist governments that believed that they could generate growth simply by subsidizing, sometimes at a rate of 100 percent, large amounts of investment in physical capital. If this non-market approach works at all, it works only when a less developed country can copy from the markets operating in other countries and somehow know what to copy. Reducing the rate of subsidy from 100 percent to 50 percent or 10 percent may move away from a totally socialistic approach, but it does not necessarily improve the government's ability to know whom to subsidize, and, just as importantly, whom to tax to pay for the subsidy.

One reason, of course, is that government officials are not very good at picking out which investment to favor. At one point in time, investment in equipment may be the best use of funds; at another, investment in plant; at a third, training of the existing work force; and at a fourth, investing in learning how to market goods overseas.

The United States recently went through a period of stagnation in which the rates of gross investment and growth in the supply of labor were as high or higher, not lower, than in previous periods. Stagnation was caused mainly by the misallocation, not the supply, of total resources. Tax and loan policies, including past investment incentives, actually

contributed to this stagnation by creating misleading signals on how to allocate scarce resources to their best and most productive uses.

The Failure of Saving Incentives

Like investment incentives, saving incentives have also failed, but for different reasons. Saving incentives are almost always associated with acts of purchase, deposit, or retention that can be easily identified. For any tax proposal to be labeled a saving incentive, however, three criteria must be met. First, tax benefits should not go to taxpayers who simply switch assets from one form of saving (or one type of account) to another. The shift of assets into a tax-preferred form permits taxpayers to achieve tax reductions with no increase in their saving.

Second, no tax provision can be labeled a true incentive unless it applies at the margin. Caps and limits on benefits, whatever their equity effects, reduce the incentive effect of any subsidy.

Third, a tax incentive for saving must provide symmetrical treatment of positive saving on the one hand and negative saving or borrowing on the other. If a taxpayer can borrow and deduct the costs of interest, while at the same time acquire an asset yielding income that is partially or fully tax-exempt, the taxpayer may achieve a tax reduction with no increase in net saving. If a taxpayer deposits money in an individual retirement account, for instance, and then later borrows an equal amount to

finance some other activity, there is no increase in private saving, but a decrease in public saving through the tax reduction generated.

Suppose one takes the most optimistic view of the responsiveness of taxpayers to saving incentives, and ignores that almost all purported incentives fail one or more of the three criteria just listed. Even then, such incentives cost the taxpayer more than than generate in net saving to the economy. In other words, if lucky, we might get 40 cents of private saving for a decline in public saving of one dollar.

The issue of borrowing deserves some examination. As a society, we seem not to be saving less, but to be borrowing more. More precisely, the supply of gross saving and loanable funds has not decreased, but those funds have been borrowed less to finance net new investment, and more to support current activities and consumption. Despite recent concerns about leveraged buy-outs and other corporate borrowing, the postwar era has witnessed only modest increases in corporate borrowing relative to borrowing by households and by noncorporate businesses. In these latter cases, the amount of borrowing has been well in excess of the amount of new investment in housing or physical capital. In effect, the borrowing is financing consumption.

Some of the trend toward borrowing to finance current consumption is irreversible. For instance, financial markets have evolved considerably, and today there is far greater recognition that human capital may provide sufficient collateral for a variety

of loans. Nonetheless, the trend makes clear that we have less reason than ever to subsidize gross saving that simply may be borrowed elsewhere to finance consumption.

What Can Be Done

Like many economists, I tend to favor a decrease in the federal deficit. It represents perhaps the best means of attempting to increase our national saving. My reason for favoring a reduction in the deficit, however, is primarily that it would represent sound budget policy. It would give us a much greater ability to change budget priorities over time to meet needs that become current, as opposed to allocating an increased share of federal expenditures to pay interest on debt. A smaller deficit would also likely result in lower real interest rates, thereby providing some additional benefits to the economy. At this stage in the economic cycle, it is also appropriate to reduce the ratio of debt to GNP.

The net effect on domestic investment is much more uncertain. Again, reducing the government's demand for loans does not insure that loanable funds will then translate into an increase in investment. Even if there were no increase in domestic investment, a decrease in federal government borrowing would be likely to increase domestic saving and therefore reduce the amount of foreign borrowing.

I realize at this point that I have given no easy directions on how to foster growth in the economy. If there was an easy answer, it would have been adopted a long time ago. There is no

substitute for "doing things right." Reduction of the budget deficit represents good budget policy independently of its effect on saving.

While reduction of the budget deficit is an important goal, it is hardly a panacea. If reduction of the budget deficit is attained at the cost of poor expenditure policy and poor tax policy, then it is quite probable that the growth rate of the economy will be reduced, not increased. A good education policy, a good environmental policy, a tax policy with minimal distortions, and so forth -- these are the tough, but most certain, means by which Congress can help to foster growth.

Even if saving incentives are highly effective, recall that they cost the taxpayer more than they generate in net saving in the economy. Once again, this argues that reducing the government deficit is a superior means of attempting to increase national saving.

One means of reducing the deficit in a way that is consistent with both expenditure and tax policy principles, would to provide for greater funding of government insurance. In effect, there should be decreased reliance on pay-as-you-go mechanisms that reduce the amount of private funding (and saving) that would be associated with the private provision of similar insurance. A case in point is the Pension Benefit Guarantee Corporation, which effectively has increased the amount of private pension wealth without ever providing current funding for these public liabilities. Another recent example of inadequate funding is provided by the minimal capital requirements and federal insurance reserves for the liabilities of saving and loans.

Those who would foster saving in the economy would surely agree that subsidizing negative saving or borrowing is inappropriate. Today this subsidy is provided mainly through the allowance of a deduction for interest costs that are not real but are due to inflation. Since interest recipients are often nontaxable or in lower tax rate brackets, this subsidy for borrowing is not offset by the penalty on holders of interest-bearing assets. Regardless of its effect on net saving, this subsidy for borrowing encourages inefficient patterns of asset ownership and financial intermediation, and discourages equity financing.

Reduction of some of the tax subsidy for borrowing would also tend to lower interest rates, leading to other beneficial effects for the economy. In addition, if we are going to return to a tax system with either an exclusion or indexing of capital gains, some measures will have to be taken to insure that interest costs are not fully deductible when gains are only partially taxable.

Despite my many reservations about government's ability to know what type of investment to subsidize, there are two major exceptions: education and research.

As I have noted, investment in education and training are difficult to measure and are not included in national income figures on saving or investment. Nonetheless, investments in education and training are as important, if not more important, than ever before, and I strongly support the efforts of both the Administration and the Congress to give renewed attention to education as a source of long-term growth.

Research is another area where evidence still tends to point to a fairly high rate of return to society. The reason is fairly obvious: the returns to private research seldom inure solely to the persons undertaking the research.

If members of this Committee continue to examine the ways in which the government attempts to foster growth, I encourage them to review public and private research financed or subsidized by the U.S. Government. In this light, someone should begin a review of how the research budget might be reallocated in a world in which defense expenditures, even under the Administration's request, apparently are going to decline as a percentage of GNP. If, God willing, the Cold War continues to thaw, there may be significant and fundamental implications and opportunities for U.S. research and development that should be investigated. We ought to begin thinking now about how this process should evolve.

Representative HAMILTON. Thank you, Mr. Steuerle.
Mr. Auerbach, please proceed.

STATEMENT OF ALAN J. AUERBACH, PROFESSOR AND CHAIRMAN, DEPARTMENT OF ECONOMICS, UNIVERSITY OF PENNSYLVANIA

Mr. AUERBACH. Thank you.

Let me begin by summarizing the the main points that I make in my prepared statement and then briefly go through the points in more detail.

First, as you indicated in your opening remarks, the U.S. saving rate has been very low in recent years, and this induces two problems, a shortrun problem and a longrun problem:

The shortrun problem is the imbalance between saving and domestic investment. The longrun problem is the more gradual one of a slower rate of capital and wealth accumulation and a lower standard of living that will be enjoyed in the future.

The shortrun problem of trade associated with the imbalance between saving and investment can only be dealt with through a change in the imbalance between saving and investment. This is a point that others have made before and it is a point that is worth emphasizing again and again and again, particularly in light of attempts to alter the trade balance through protectionism and other measures directed at trade rather than at the saving and investment imbalance which has given rise to the problem.

The longrun problem, although it will only occur gradually, is one that really has to be dealt with in the shortrun in much the same way that the crisis in the Social Security system was dealt with in 1983. These problems unfold gradually, but once their full impact is felt, it's really too difficult to do anything about them. One can't undo a decline in living standards that has occurred over 70 years over a short period of time.

Second, there are different measures of national saving and investment, and if one looks at broader measures of each, one gets a bleaker picture. For example, national saving has looked worse in recent years relative to private saving because of the deficit.

And indeed, looking at investment, the net investment numbers in the 1980's have been poor relative to net investment performance in the seventies and the sixties, even though gross investment doesn't show the same decline.

Third, most discussions of the Government's role in affecting saving and investment have focused on tax incentives that affect private behavior, private saving and private investment. But, of course, government can affect saving and investment as well via the deficit and via public investment. Mr. Steuerle alluded to the latter briefly in talking about human capital and indeed one can talk about other forms of government capital as well.

Fourth, evidence for tax policy being able to affect private saving and investment is very unclear at best, while recent evidence suggests that the Government's impact through its direct savings and investment behavior exerts a more powerful influence on national savings and investment.

Finally, in its ability to influence savings and investment through its direct savings and investment behavior, the Government has exerted a considerable downward impact on national saving and investment during the 1980's. And this decline in national saving induced by government behavior in the 1980's is particularly large if one accounts for the decline in government capital spending which is not included in deficit measures because of the absence of a capital budget in government accounts.

Now briefly to go through my prepared statement:

Table 1 at the back of the prepared statement reviews what national saving has been in the United States, as well as the other G–7 countries, in the last decade. And contrary to the usual focus on the United States versus Japan and why aren't we doing better than Japan, we really haven't done as well as anybody. The United States has in virtually every year had the lowest national saving rate of any of the G–7 countries—I think there's one exception—and certainly the average for the decade is far lower for the United States than it is for any of the other G–7 countries, including those for whom performance has not been especially good.

Second, table 2 focuses a little bit more on different measures of saving in the United States over this period. The measures I give here are the personal saving rate, the private saving rate, which includes business saving, and the national saving rate, which includes the Government deficit.

As Mr. Makin mentioned in his initial comments, the decline in saving is not solely due to the budget deficit. Looking at national saving, we can see that the personal saving rate has indeed declined. It started off the 1980's right around what had been its normal level, but it declined sharply in the late eighties. Combined with the Government deficits over this period, we've had a remarkably low national saving rate. For the period 1985 to 1988, the national savings rate averages 2.5 percent of net national product.

Turning to private investment in table 3, I give here the fractions of gross national product devoted to gross private investment. And indeed, one does not note the same drop in investment that one observes in saving.

The second column is a comparable calculation for net investment rather than gross and, as I discuss in my prepared statement, I think net investment is the more relevant number in considering capital accumulation because net investment is really what we are adding to the national capital stock in any given year.

Two comments about this net investment figure: one is that even though there has not been any marked decline in the late eighties for investment the way there has been in saving, the average level of net investment as a fraction of income in the United States in the 1980's is markedly lower than it was in the 1970's or the 1960's; it's about 5.3 percent of net national product for the period 1980 to 1988, whereas it was over 7.5 percent of net national product in both the sixties and seventies.

Second, one can see readily by comparing the investment numbers in table 3 and the saving numbers in table 2 where the current account imbalances that we are currently experiencing have come from.

If one compares the net investment numbers in the second column in table 3 with the national saving numbers in table 2, you'll see that for the years 1979 through 1982 these numbers were roughly in balance: national saving, that is the funds made available for private investment, were roughly equal to the funds needed for private investment, and hence we had fairly insignificant problems on the current account.

Beginning in 1983 the imbalance appeared and with the growth of the economy out of the recession of the early eighties, private investment recovered but private saving didn't. As a result we had an imbalance.

It is worth pointing out that it is an imbalance between national saving and investment. The Government deficit by itself cannot be blamed for this imbalance. Had private saving grown or even maintained its previous levels during this period, the current account imbalances that we are now experiencing wouldn't have been as bad as they are.

The next thing I discuss in my prepared statement is the effectiveness of policy suggested by this historical evidence. With respect to investment, I think one would have to say that the jury is still out. It's very hard to say whether the tax incentives of the 1980's, for example, 1981, were effective.

As I indicated, net investment has been poorer in the eighties than in the seventies, gross investment has been about comparable. On the other hand, the tax incentives have not been the only thing that government, either directly or indirectly, has done to encourage private investment in the 1980's.

There was a very significant increase in real interest rates in the 1980's that occurred at the same time that the Economic Recovery Tax Act was passed. One could argue that it's very difficult to disentangle the effects of tax incentives passed in the early eighties which would have increased investment from the effects of real interest rates, which would have decreased investment.

Likewise in 1986 we had an increase in the tax burden on new investment, but at the same time real interest rates have been declining in the last couple of years.

I would say that with respect to the effects of incentives on private saving, the evidence makes me far more skeptical. The 1980's was as close as we've ever come to a controlled experiment to see what tax policy can do to increase saving.

We had unprecedented high real interest rates. We had declines throughout the decade in the marginal tax rates that savers have faced and we had, during the early eighties, the individual retirement accounts, which were an additional tax incentive for saving.

All of these policies as well as macroeconomic effects should have led to increases in personal saving were personal saving responsive to the real aftertax interest rate but in fact, as you've seen, the personal saving rate declined over this period. This leads me to be very skeptical that savings incentives targeted at personal saving would be likely to lead to a very large increase in the personal savings rate.

Now finally turning to what government can do, if one looks at the national savings numbers in table 2, one sees that it's only

been 2.5 percent of net national product in the last 4 years, which was a very, very big drop from the previous period.

The drop is even larger if one notes the fact that the Government saving rate does not account for government capital expenditures. In fact, were there a capital budget, government capital expenditures would be counted as government saving and national saving as well as national investment.

If one looks at what's happened to this kind of government saving in the 1980's—not to talk about research and development and human capital, which are more difficult to quantify, but simply the fixed capital stock of the Federal Government and State and local governments, the picture gets worse than is presented simply by looking at the Government budget deficit as measured.

From 1980 through 1987, which is as late as the numbers go, the real net Federal Government capital stock did not grow. The State and local capital stock, much of which has been traditionally partially funded by the Federal Government, grew by 6 percent.

By comparison, the private capital stock over this period grew by 19 percent, while the Government's military capital stock, as opposed to the nonmilitary capital stock I was referring to before, grew by 48 percent.

If one adds this decline in saving to the deficit numbers that are reported, the change in Government saving is really larger than it is normally considered to be and the decline in national saving is greater.

My conclusion is that on the basis of the evidence—the at best very mixed evidence concerning the ability of government to affect private investment and private saving through tax incentives, and in light of the recent experience that suggests that the Government can exert quite a powerful impact on national saving through its direct policies affecting the Government deficit as measured, as well as the direct Government investment in capital, by far the most effective way to increase the national saving rate would be for the Government to reverse the policies of the 1980's of cutting Government saving and cutting Government investment.

[The prepared statement of Mr. Auerbach follows:]

PREPARED STATEMENT OF ALAN J. AUERBACH

Mr. Chairman and Members of the Committee:

It is a pleasure to have the opportunity to appear before you to present my views on the current state of U.S. saving and investment and the role for government in this area. There is little doubt that capital accumulation has played a significant role in the achievement of the standard of living and international influence that we as a nation presently enjoy. Despite the economy's strong performance during the past several years, national saving, measured in many ways, has lagged, suggesting that economic problems may lie ahead of us. Some problems related to our low saving rate, notably the stubborn merchandise trade imbalance, are already with us and cannot be solved without attention to the issue of national saving.

In the longer run, the most serious problem we face is more subtle and, alas, more fundamental: the less we save, the poorer we will be in the future. This poverty will only be relative, to what we could have had and what other nations may then have and, though significant, it will occur gradually. Despite the absence of a crisis, you are right to consider the problem now. As was the case with the reform of the Social Security system that was enacted in the early 1980s, one must envisage long-run solutions to such long-run problems involving saving and capital accumulation.

Analyses of government's role in fostering saving and investment have often focused on the design of tax structure and the

introduction of tax incentives to spur private capital formation. Over the years, the performance of such incentives has been disappointing. Yet there is another, more direct role for government in influencing national saving and investment, through its own saving and investment. It is here that government can be most effective. Unfortunately, this effectiveness has been demonstrated most recently through reductions in national saving and investment.

Trends in National Saving and Domestic Investment

Though comparisons are often made with Japan, the United States has for many years saved considerably less of its income than any of its other major trading partners. This is evident from Table 1, which gives the rates of national saving (private plus public) for the seven major industrial nations, including the United States, since 1979. Moreover, the U.S. saving rate has declined in recent years. The extent of this decline depends on how saving is measured.

Saving equals income less consumption, but this does not resolve various ambiguities concerning the measurement of these items. Perhaps the most widely cited measure of saving is the personal saving rate, shown in the first column of Table 2. This is the fraction of their disposable income that households save. Relatively stable in the early 1980s at a level comparable to the averages of earlier decades (6.1 percent for the 1960s, 8.0 percent for the 1970s) this measure has fallen more recently, reaching a low of 3.2 percent in 1987, its lowest value in four decades. It increased in 1988 and again in the first quarter of 1989, but still remains well below the value it had in the first part of the decade and in earlier years.

For several reasons, it is useful to consider a broader measure than personal saving. First, a significant fraction of saving has traditionally been done by business. Second, empirical research has suggested that personal and business saving are closely related, that personal saving decisions respond to those of business and cannot be understood in isolation. Third, the accounting conventions used to define personal income and saving are of necessity somewhat arbitrary. For example, though they are essentially equivalent transactions, the payment of dividends reduces business saving and increases personal saving, while a redemption of corporate shares does neither. Given the considerable increase in the latter type of transaction in recent years, it is useful to examine a measure not as dependent on such conventions. The second column of Table 2 gives such a measure, the ratio of net private saving to after-tax private income. Although it shows a less precipitous drop than the personal saving rate, its pattern is similar. It, too, experienced a trough in 1987.

Perhaps the broadest measure of saving, and one quite relevant to a discussion of the government's role, is the net national saving rate, already shown for several countries in Table 1. It is given again for the United States in the third column in Table 2, (based for consistency on the U.S. national income accounting methodology). It relates private saving plus public saving, as measured by the aggregate deficits of federal, state and local governments, to net national product (NNP, equal to GNP less capital consumption). Here, one may observe the impact of the federal budget deficits of recent years. As early as 1982, the national saving rate had fallen to 2.3 percent of net national product, from 8.6 percent

just three years earlier. Even after the end of the recession of the early 1980s, budget deficits remained significant. Combined with the decline in private saving, this resulted in a national saving rate that averaged just 2.5 percent during the period 1985-88.

Unlike saving, gross investment has remained relatively strong in the late 1980s. As may be seen in the first column of Table 3, the share of gross national product accounted for by gross private domestic investment has remained close to 16 percent since 1985. This share of GNP is comparable to those of earlier periods. From 1980 through 1988, gross domestic investment averaged 15.8 percent of GNP, compared to an average of 15.5 percent for the 1960s and 16.4 percent for the 1970s. However, while gross investment is useful as a measure of how the economy's resources are being used, net investment is a more accurate measure of the extent to which funds are being devoted to the expansion of the capital stock. The difference between the two, depreciation or capital consumption, is the amount of investment required simply to replace capital that is wearing out. Net investment is also more directly comparable to the net saving figures in Table 2 that have already been discussed.

The ratio of net private domestic investment to NNP, given in the second column of Table 3, averaged 5.3 percent from 1980-88, compared to decade averages of 7.7 percent for the 1960s and 7.6 percent for the 1970s. The explanation for the discrepancy between the stability of gross investment and the decline in net investment is the increasing share of domestic investment devoted to machinery and equipment since the 1960s. In what may be the clearest historical example of tax policy affecting investment behavior, the introduction

of the investment tax credit in 1962 coincided with a strong and lasting shift in the share of investment spent on assets that qualified for the credit. The result has been a shift in the composition of the capital stock. According to the Bureau of Economic Analysis, in 1962 business structures represented 61 percent of the fixed nonresidential net capital stock. By 1987, this fraction had fallen to 50 percent. This change in capital stock composition has increased the ratio of depreciation to gross investment, widening the gap between gross and net investment ratios. Thus, though it has not fallen during the 1980s, net investment has been generally weaker than in previous decades.

In summary, private saving and, especially, national saving, has fallen during the 1980s. While investment has been relatively stable over this period as a fraction of aggregate output, net investment during the 1980s has been lower than in the previous two decades.

Tax Incentives and Recent Performance

Much of the policy discussion of government's role in the area of capital formation has focused on tax policies to stimulate private saving and investment. However, despite compelling theoretical arguments in favor of the efficacy of such policies, there is scant evidence to support the notion that tax policy has been an effective means for increasing either saving or investment significantly.

With respect to investment, it may well be that tax policy is important but other elements of government policy have been even

more important. Among the many careful empirical studies of the subject to date, few have been able to identify convincingly a significant, separate impact of tax policy on investment.

For example, the large reduction in the tax burden on new nonresidential fixed investment introduced in 1981 by the Economic Recovery Tax Act did not lead to a higher level of investment. As the third column of Table 3 shows, net nonresidential fixed investment was lower as a share of NNP in every year of the period 1981-85 (before the passage of the Tax Reform Act of 1986) than in 1979 or 1980. Yet other things happened during the early '80s, too, including a sharp rise in real interest rates, arguably due to the fiscal and monetary policy mix adopted during the period. In its impact on the cost of capital facing firms, the interest rate increase was considerably more important than the 1981 tax reduction, but the effects of the two are difficult to sort out empirically. Similarly, though tax incentives were reduced in 1986, real interest rates have been somewhat lower in recent years, again making it difficult to use the relatively stable behavior of investment from the pre-1986 to the post-1986 period as evidence of the inefficacy of tax incentives for investment.

As indicated above, there is some evidence that tax policy can affect the mix of fixed investment. The jump in equipment versus structures investment beginning in 1962 does suggest a causal role for the investment tax credit, but the 1986 repeal of the credit was not accompanied by a shift back to nonresidential structures. In fact, the relatively healthy recent performance of business investment has been fueled by purchases of machinery and equipment. Again, there is much at work here beyond tax policy. For example, in 1988, fully 23

percent of gross nonresidential fixed investment expenditures were devoted to purchases of information processing and related equipment. It is difficult to distinguish the effects of taxes among the many powerful factors influencing investment.

As with investment, there is little convincing evidence of an impact of tax policies altering saving through a change in the after-tax rate of return. Here, the 1980s offers a clearer experiment, since the rise in real interest rates during the early 1980s and the reduction in personal marginal tax rates begun in 1981 both increased the after-tax return to household savers. Yet the personal and private saving rates, relatively stable over earlier periods, actually fell during this interval. Despite some evidence from household studies suggesting that tax incentives such as the Individual Retirement Account system in full force between 1981 and 1986 may have led to some new saving, such an impact is not apparent in the aggregate saving data. It has proved extremely difficult to show that household saving responds to the after-tax rate of return.

A second potential channel through which tax structure could affect saving is through the distribution of the tax burden among households and businesses. Some have argued that, because businesses save (via retained earnings) a higher fraction of their after-tax income than households do, a shift in the tax burden from business to households should increase saving. This proposition is questionable in many respects. First, the measurement of corporate saving itself is arbitrary, and overstated in recent years because corporate share repurchases have not been counted as distributions of earnings. Second, changes in corporate saving can affect the saving behavior of

shareholders. There is no empirical evidence that a shift in funds from shareholders to corporations alters the level of private (household plus corporate) saving. In particular, there is no evidence that the shift in the tax burden from households to corporations caused by the Tax Reform Act of 1986 reduced private saving.

A related point concerns the impact of the recent surge in takeovers and leveraged buyouts. There has been concern that funds leaving the corporate sector through the redemption of shares of acquired companies would no longer be available for domestic investment. Unless such funds were entirely consumed by households, this is incorrect. In fact, as already suggested, there is no convincing evidence that an increase in distributions by corporations reduces private saving at all. While the relative treatment of debt and equity is an important policy question, it should not be thought of in terms of encouraging national saving or domestic capital formation.

The Direct Effects of Fiscal Policy

Though tax incentives may not have played a major role in the determination of U.S. saving and investment, fiscal policy clearly has. The large federal budget deficits of the 1980s have reduced national saving, and the reductions in government capital expenditures have reduced national investment.

As a comparison of the second and third columns in Table 2 demonstrates, a major factor in the decline in national saving during the 1980s has been the decline in government saving. Since state and

local governments ran surpluses over the period, the responsibility lies at the federal level. Many economists have pointed out that it is national saving as a whole, rather than just the government's contribution via a budget surplus or deficit, that is relevant for issues of capital formation. If, as some economists would predict, private saving increases during periods of high government deficits, then the size of the deficit itself loses significance. However, the deficits of the 1980s did not lead to more private saving. Indeed, private saving fell even as budget deficits rose.

This decline in national saving has played a central role in the current account imbalances of the 1980s. As the national income identity shows, domestic investment must equal national saving plus net inflows of capital from abroad. During the period 1979-82, there was a rough balance between national saving and domestic investment. Since 1983, domestic investment has exceeded national saving by a considerable amount, and it has been the substantial inflows of foreign capital over the period that sustained this imbalance. The large increase in net imports of goods and services over the same period is simply another measure of the same imbalance. By demanding more than we have produced, we have had to obtain goods and services from abroad.

Given the amount of effort devoted to reducing trade barriers and maintaining the competitiveness of the dollar, it is important to emphasize that the aggregate trade imbalance cannot be reduced by any policy that does not reduce the gap between national saving and domestic investment. This is not an economic theory, but an identity. If trade policy succeeds in increasing net exports

without increasing national saving, domestic investment must fall by the same amount, regardless of the exchange rate or the performance of particular industries. If the United States sells more abroad while maintaining its current level of government purchases and household consumption, there will be a reduction in the output that may be devoted to private investment.

Other countries run government budget deficits without having serious trade imbalances. Such countries have sufficient private saving to finance budget deficits and domestic investment as well. The United States does not. Given the difficulty of using policy to increase private saving, public saving via reduced deficits is the policy most likely to succeed in eliminating the trade imbalance without destroying domestic investment.

Though any reduction in the government budget deficit may increase national saving as it has been defined thus far, use of a broader concept of saving suggests that many budget-cutting measures will be ineffective. The distinction results from the federal government's lack of a capital budget.

If one includes net government capital expenditures in a more comprehensive measure of national saving, then a deficit-financed capital project does not reduce national saving; nor does a deficit-reduction plan that cuts capital expenditures increase national saving. Indeed, if the federal government did maintain a capital budget, the performance of the 1980s would appear even bleaker than already depicted. Even as federal deficits increased during the 1980s, expenditures on government capital projects were cut. According to Bureau of Economic Analysis estimates, the federal

government's real nonmilitary net capital stock was essentially constant from the end of 1980 through the end of 1987. The state and local government capital stock, financed in part by federal expenditures, also suffered, growing by only 6 percent over the same period. (Each of these capital stocks had grown more rapidly during the period 1975-80.) By contrast, the military capital stock grew by 48 percent and the private capital stock by 19 percent over the same period. Conceiving of capital still more broadly to encompass human capital simply reinforces the recent pattern, given the reductions in federal spending on education during the 1980s.

This, then, is the second direct channel through which the federal government has been able to affect national wealth accumulation. Given government capital spending, a reduction in the deficit increases national saving. Given the deficit, an increase in government capital spending also increases national saving, broadly defined. The 1980s witnessed a reduction in national saving through each of these channels.

Conclusions: What Can Policy Do?

There is little question that U.S. saving has declined during the 1980s. Private saving has declined and government saving has declined, both through increased budget deficits and reduced government capital formation. Net private investment, though lower as a fraction of aggregate output than in earlier decades, has not fallen during the 1980s. The drop in national saving relative to domestic investment is the source of the current account deficits experienced since 1983. Only increases in national saving, or reductions in

private or public investment can ameliorate the trade problem. Only increases in saving will alter the slow-growth trajectory that one should expect for a nation with a low rate of wealth accumulation.

There is little empirical evidence that public policies to alter private saving and investment have been effective. Investment behavior may be affected by tax policies, but other determinants of investment, including changes in real interest rates arguably induced by the reduction in national saving, have been more significant in recent years. With reductions in marginal tax rates, increases in real interest rates and increases in government deficits all pointing toward an increase in private saving during the 1980s, the decline actually experienced does not make one hopeful that policy can be used to effect significant increases in private saving.

Through its policies directly decreasing public saving and investment, the government has effectively reduced national wealth accumulation to an extent that would have been difficult through indirect private sector incentives. A reversal of this pattern seems the likeliest solution to the short-run and long-run problems of inadequate national saving.

Table 1

National Saving as a Percentage of National Income

	1979	1980	1981	1982	1983	1984	1985	1986
U.S.	9.4	6.7	7.3	3.1	2.5	5.0	3.6	2.8
Japan	21.8	21.0	20.8	19.7	18.7	19.8	20.8	20.9
Germany	12.8	11.4	9.0	8.8	9.7	10.4	10.7	12.5
France	14.0	12.8	9.7	8.2	7.3	7.3	7.2	8.3
U.K.	9.7	7.2	6.3	6.8	6.8	7.0	7.8	6.8
Italy	16.1	15.7	13.2	12.2	12.5	12.8	12.4	12.5
Canada	13.8	13.3	13.0	8.9	8.4	9.9	8.9	7.8

Source: Organization of Economic Cooperation and Development, National Accounts,1974-1986.

Table 2

Saving Rates in the United States

Year	Personal	Private	National
1979	6.8	10.3	8.6
1980	7.1	9.1	5.8
1981	7.5	9.6	6.4
1982	6.8	7.8	2.3
1983	5.4	8.0	2.2
1984	6.1	9.6	4.6
1985	4.4	8.0	2.7
1986	4.0	7.4	2.1
1987	3.2	5.8	2.0
1988	4.2	6.5	3.2
1989:1	5.7	na	na

Sources: Economic Report of the President, 1989;
Survey of Current Business, April 1989

Private saving equals personal saving plus gross business saving less capital consumption allowances, NIPA basis

Private income equals undistributed corporate profits plus disposable personal income less interest paid by consumers business

National saving rate equals private plus government saving divided by NNP

Table 3

Investment in the United States

Year	Total (Gross)	Total (Net)	Nonresidential Fixed (Net)
1979	18.1	8.4	4.4
1980	16.0	5.5	3.7
1981	16.9	6.2	3.6
1982	14.1	2.3	2.4
1983	14.7	3.5	1.5
1984	17.6	7.4	2.7
1985	16.0	5.8	2.9
1986	15.7	5.5	2.1
1987	15.7	5.8	1.8
1988	15.8	6.0	na
1989:1	15.9	6.3	na

Sources: Economic Report of the President, 1989;
Survey of Current Business, April 1989

Gross investment expressed relative to GNP

Net investment expressed relative to NNP

Representative HAMILTON. Well thank you very much, gentlemen. The bells you hear ringing mean that we have a vote in the caucus and so I'll just ask a couple of very quick questions, turn it over to Senator Roth and then I'll come back and pursue the questions further with you. I apologize for the interruption.

Just to get the very basics here: all of you agree that it would be desirable to increase saving and investment? You've all said we have low saving and low investment. And you would all agree, would you not, that one of the critical steps that we need to take to improve growth in the American economy is to increase saving and investment. Is that correct?

Mr. MAKIN. It's certainly the conventional wisdom, and I guess my own value system would say yes. Everybody does have the option to save more. And so when we say we want more saving, we're really saying that individuals and businesses somehow are not saving the right amounts and that we have to go in and change that. And I think what we've all said is it's very difficult for the Government to find ways to make sure that that happens.

Representative HAMILTON. We'll get to the options here in a little bit, but I just want to get the premise down here.

We'd all agree with that, right? Mr. Steuerle, you agree with that. Mr. Auerbach, you're with me on that, right?

Mr. AUERBACH. Yes.

Representative HAMILTON. You're with me on that, right?

Is it important that we encourage both saving and investment or just one or the other? Which is more important and what's the relationship between the two?

Mr. AUERBACH. I think that national saving is the key. Investment is an issue of the best allocation of resources. It's national saving that in the long run affects the wealth of the country. Investment I think will drive itself.

Representative HAMILTON. If you get the saving, you'll get the investment, is that it?

Mr. AUERBACH. You'll get the investment. And in fact if it's the case that there are a lot of very, very profitable investment projects abroad for which our national savings should be used, there's nothing wrong with that.

Representative HAMILTON. Do you all agree with that?

Mr. STEUERLE. Yes.

Representative HAMILTON. Is there a link between investment and productivity that is clearly discernible?

Mr. MAKIN. Tricky business. Some suggest that more investment means that machines are being replaced more rapidly, people are learning how to use the machines and embodying the new improvements in the new machines.

So if you use a machine and replace it in 5 years instead of 10, the things you've learned get embodied in the new machine and that increases what we measure as productivity. The evidence on that is very mixed.

In fact, we are just completing a paper that suggests that there is some so-called embodiment or learning by doing but its contribution to growth is small, indeed.

Mr. AUERBACH. If I could just clarify, I agree with the point you're making but you're really talking about total factor productivity growth.

Mr. MAKIN. Yes.

Mr. AUERBACH. I mean, labor productivity——

Mr. MAKIN. Oh, by definition—yes——

Mr. AUERBACH [continuing]. Will be increased by a capital accumulation even if that kind of growth isn't——

Mr. MAKIN. No, OK.

Representative HAMILTON. I'm going to have to go.

Senator Roth, I turn it over to you and I'll be back in a few minutes.

Excuse me.

Senator ROTH [presiding]. Thank you, Mr. Chairman. Let me go back again and ask what are the economic benefits of a higher private savings rate? Would a higher private savings rate affect labor productivity and international competitiveness in the long run?

Mr. MAKIN. Let me take a try at the issue. If businesses and individuals decide to save more money, then they are providing for an increase in future consumption. What we're saying is we want to be better off in the future relative to today the more we save. And, of course, more saving accommodates more investment. That's what we were suggesting.

The other thing that happens if we have more saving is that we will have to borrow less money abroad to finance investment, somethings we may be politically uncomfortable about. We'll have a smaller so-called current account deficit and a smaller trade deficit.

Senator ROTH. Anyone else want to comment?

Mr. STEUERLE. The only thing I would add, Senator Roth, is that saving and consumption—or investment and consumption—in some sense go hand-in-hand. We could have a very high growth rate in the economy in which actually our saving rate goes down but our total savings go up.

In the end I would just like to reiterate what Mr. Makin has said: that what we are trying to finance with saving is in fact future consumption. We can't simply just go out, throw money at, say, a bunch of extra steelmills and hope that somehow or another that is going to create an economy that's better off. What we're really aiming at is some sort of future consumption that's also good for the economy.

I think we would all agree that our saving rate is probably inadequate relative to what we as individuals believe it should be. We shouldn't think that just taking money and throwing it at saving is necessarily going to give us growth in the economy. Saving and investment and consumption in some sense all go hand in hand.

Senator ROTH. In that case it's not unlike government spending; is it? Just throwing money at a problem doesn't necessarily solve it.

Mr. Auerbach.

Mr. AUERBACH. Well as Mr. Makin said, the issues of saving and investment are in some sense separate to the extent that we're willing to countenance very large current account imbalances.

Right now we have a very low national saving rate and our investment rate, while not as high as we might like it, is relatively healthy and it is being kept that way through infusions of foreign capital. That will maintain our level of productivity growth and our adequate capital stock in the country, but it——

Senator ROTH. So long as they continue.

Mr. AUERBACH. So long as they continue to do it. And if they stop doing it, then we're going to have an increase in interest rates and a decline in investment and that ultimately is bound to happen.

Senator ROTH. But does that in one sense put us at risk as to what the foreign investor wants to do?

Mr. AUERBACH. Yes, it does.

Senator ROTH. Now many argue that our tax system contains an inherent bias against saving. Would you agree?

Mr. MAKIN. Yes.

Very briefly, we should not allow the deduction from taxable income of all interest expense, especially during inflationary periods, since much of the interest rate is merely an inflation premium that is compensated or that is reflecting the fact that the borrower is losing.

If I lend you a thousand dollars and I charge you 10 percent, when there is a 10 percent inflation rate I lose because I don't earn anything real back. Likewise lenders are encouraged—I'm sorry, borrowers are encouraged to spend by the failure to index and savers are discouraged from saving by the fact that they're taxed on all of their interest earnings and not on the real portion.

So if we wanted to encourage saving one thing that we could think about doing—and remember, discouraging spending is encouraging saving—is cutting back on the full deduction of interest expense and encourage the saving by taxing less than all of interest income, only the real portion.

Senator ROTH. But is it not implicit in what you're saying that tax policy does therefore have an impact then on what——

Mr. MAKIN. I believe it does. I believe that tax policy can affect saving.

Senator ROTH. Isn't it a fact that, in the case of savings, you are at present taxed on the funds that you set aside for savings and you're also taxed on your interest or earnings on those savings, whereas in the case of consumption you are only taxed once, when you spend it, but you aren't later taxed on that consumption?

Mr. MAKIN. That's the major argument for a consumption tax.

Senator ROTH. Do you disagree with that?

Mr. MAKIN. I don't disagree. I'm only thinking of the current IRA plan where in effect you're not taxed on the interest accumulation in the IRA account but you are taxed on the contribution.

Senator ROTH. Either of you gentlemen——

Mr. STEUERLE. Senator Roth, if I could add, all taxes distort and, therefore, your argument that the tax system discourages saving is correct. But by the same token the tax system discourages work. And perhaps part of the qualification that we are offering is that in changing the tax system we really have to know how we're trying to change tax rates across the board. So that if we, for in-

stance, try to favor savers, but only do it by taxing workers more, the net effect on the economy is uncertain.

Senator ROTH. But the point I'm making is that tax policy does have an impact on whether one consumes or saves. Whether a particular approach is successful or not depends not only on the immediate specifics of the program. I've heard a number of businessmen say that all our media, our TV, our credit cards, and our magazines are directed at promoting consumption. They are pretty persuasive in may cases. Buy today and pay later: it's a pretty effective tool.

But sometimes you get the impression that certain economists disagree or say that tax policy really makes no difference. I find that very difficult, because some of those same economists will come before you in a nontax area. For example, I was a member of the Finance Committee when we were having serious problems on energy in the early seventies and there was a strong argument that we should offer tax incentives to get people to spend money for winterizing their home.

These same economists now come in and say that tax policy makes no difference with respect to saving. Whether you think it is effective or not there is an honest difference of opinion. But I do think that it does have an effect.

Mr. Auerbach.

Mr. AUERBACH. Yes. One should distinguish here between the incentives and the effects. We would all agree, I think, that the current tax system does reduce the incentives to save. In answer to your question about why the same economists who might think that saving incentives wouldn't do any good would favor energy conservation measures, we're much more certain that changes in the price of energy affect energy consumption than we are that changes in the price of future consumption or changes in the incentive to save affects saving. And that is an empirical matter, not really a theoretical one.

For example, if we look at American consumption of energy during the last two decades, when prices have fluctuated quite a bit, we've had substantial conservation of energy use when prices have been high.

If one makes the comparable calculation, looks at, for example, the personal saving rate in the 1980's, we would have expected significant increases in the personal saving rate. It did not happen.

And so despite stories in the small about how individual decisions are affected, which we can well believe, when we look at the aggregate evidence, it just doesn't support the claim that the changes in the incentive to save have very significant effects.

Senator ROTH. Well, of course, you know the old joke: ask 10 economists and you'll get 10 different opinions—something like politicians.

Nonetheless, in 1987, the National Bureau of Economic Research, published a working paper entitled "Have IRA's Increased U.S. Savings—Evidence From Consumer Expenditure Surveys," by Professors Vente and Wise. The study found that IRA's had significantly increased private savings and that most of the saving was new and not drawn from existing savings in other forms.

I'm sure you gentlemen are familiar with that study. Do you disagree or say that it's not a responsible study?

Mr. MAKIN. I think it is a responsible study. I think what Mr. Auerbach was saying is that when you investigate savings behavior there are so many other things to control for that it's sometimes difficult to disentangle all of the effects.

I probably disagree a little bit with Mr. Auerbach's view that we haven't received much evidence on the responsiveness of savings to incentives like interest rates or other plans, but I'm laboring under a disadvantage.

I just completed a paper on that subject where I did find that during the 1980's there was something unusual going on and it had to do with a pension funding formula that affected the measurement of personal saving. I found that if you did control for that you could find that there was a response of personal saving to higher aftertax real interest rates, which led me to suggest that indeed if we give savers more incentive to save they will save more.

The Vente and Wise study is, I think I could fairly say, controversial but very responsible and solid evidence. But you could have a very good argument—if you got one group of economists and another group of economists together. I think you could probably fight to a draw on it, but I don't know what Mr. Auerbach's views would be.

Senator ROTH. The point that comes out to me as a politician is that there is controversy here but that it would be desirable as a nation to have greater savings and perhaps less dependence on foreign investment, although I'm not as critical of that as many people are.

But it does seem to me that since there's no clear-cut answer, we ought to be willing to try some long-term experiments to see whether an IRA of some sort will not, over a long term, help the savings rate of this country.

Mr. MAKIN. I would certainly agree that we have experimented enough with investment incentives and I would see no harm and perhaps some good coming out of experimenting with saving incentives in taxes.

Senator ROTH. Would you gentlemen agree?

Mr. STEUERLE. Senator, I think whatever our opinion is as to the effectiveness of saving incentives, if properly designed—I think probably all of us would agree that almost all saving incentives are not properly designed to get to net saving. That is, in many cases, they subsidize a depositor or they subsidize a particular form of account. What we don't then do on the opposite side of the ledger is worry about what happens to the money in that account.

So that, for instance, often we end up subsidizing money in pension plans or in individual retirement accounts—and I think in many places there are good retirement policies, irrespective of the savings effects—but what often happens on the opposite side is that we have people who then borrow this money not for investment purposes but for consumption purposes.

As another example, the amount of mortgage lending in the economy continues to go up and is now far in excess of the net amount of housing investment. This tells us that most people are taking this mortgage lending and in effect using it to finance their consumption.

What we've done with a lot of these saving incentives is not just to provide money for investment but——

Senator ROTH. Isn't that a fault of the 1986 tax reform?

Mr. STEUERLE. No, I think actually the 1986 tax reform, in conjunction with the Roth-Kemp efforts to lower rates and do it consistently on both sides of the ledger——

Senator ROTH. What I made reference to is where you can borrow on your mortgage for other types of consumption.

Mr. MAKIN. It's leaving that. I mean, because you can't deduct all your credit card interest but leaving open the second mortgage, that that's what's going to happen.

Mr. STEUERLE. The 1986 act moved in the right direction. I think you might argue the Tax Code should be moved more in that direction.

Senator ROTH. I have no more questions.

Representative HAMILTON [presiding]. Thank you, Senator Roth.

I have the impression that there are two broad schools with regard to savings and encouraging savings in order to get growth. One school is the incentive school and I guess you've been talking about that with Senator Roth. The other school is the get the Federal budget deficit down school.

Of the two, where should the energy and the resources of government be focused now? We agree we have a savings problem, we agree we have an investment problem. Where do we focus the energy?

Mr. AUERBACH. I don't see why a clear choice has to be made. I said in my comments that——

Representative HAMILTON. Let me interrupt you there. That's true, of course. You want to do everything you can. But at the same time, those of us who work in this place become aware that you really do have to set your priorities on one or two of those. I'm trying to get an idea which, in your mind, is the more important that we really ought to focus on.

Now the easy answer here is, yes, you ought to do both of them. I accept that answer and don't really quarrel with it.

Mr. AUERBACH. I suppose it's just as facile to say well, if you're going to pick one why don't you just eliminate the budget deficit. It's easy to say but hard to do and one might say that however much you focus your effort on that, that may be harder to do than, for example, to alter the private tax system.

I would say that there are changes that one could introduce in the tax system that might, for example, be revenue neutral. That would have to do with reducing incentives to borrow and invest in tax-favored assets such as housing, which might very well have some effect on private saving, not necessarily a very enormous one. It ultimately would be smaller in its effect than a significant decline in the budget deficit.

But I, as an observer, don't know how plausible a significant decline in the budget is, so it's hard to make a recommendation.

Mr. MAKIN. I started my testimony by suggesting that I think that the incentives method has more potential. That is, if we say that our current account deficit is $135 billion in 1988 and calculate how much of that is due to personal saving being below its his-

torical norm, that's two-thirds of it, and one-third of it is due to a budget deficit that's above its historical norm.

So I would say on that basis to go the incentives route and also I think, given the——

Representative HAMILTON. And remove the disincentives——

Mr. MAKIN. Remove the disincentives, exactly.

But you know there's a reason why there are obvious things to do. Remember, more saving is less consumption. One of the reasons that our Tax Code is biased against saving is that we very heavily subsidize the consumption of housing services and it's very popular.

So that measures that really cut into this—and again the interest income and expense is something I think you could do and also cut the budget deficit—are easier said than done because those are very popular provisions in the Tax Code.

Representative HAMILTON. Mr. Steuerle, do you have any observation on that general question?

Mr. STEUERLE. I do worry, as I indicated in my testimony, about simply trying to enact savings incentives as a means to deal with the problem of saving. We're uncertain as to its ultimate effect given some of the design features that I commented on. If the incentive results in an increase in the budget deficit, it seems to me that our net saving in fact could go down rather than increase.

Unfortunately, I suppose my problem in answering your question, Chairman Hamilton, is that I have no simple answer for the question of growth. It seems to me it's a combination not just of one or two policies but hundreds of policies. Every single policy that the Government enacts often has an indirect effect on saving and investment and its allocation, which I again continue to emphasize is probably as important for growth as is the supply of saving.

Representative HAMILTON. Why do Americans save so little?

I'm sure you've looked at other economies where they have a better savings rate than we do. What is it about the American people that we don't save very well?

Mr. MAKIN. I'm going to speak not as an economist but as an observer.

Representative HAMILTON. It's not really an economic question.

Mr. MAKIN. It's very hard to answer that one.

I think first we are an optimistic people and since saving is providing for future contingencies, we tend to feel less of a need for caution than let's say Europeans or Japanese, who have been through wars that have eliminated a large portion of wealth.

Representative HAMILTON. Does the Social Security system discourage savings?

Mr. MAKIN. That's a tough one.

Mr. AUERBACH. It may, but Germany, for example, has a very generous Social Security system.

Mr. MAKIN. That's not the whole answer.

The other thing is in Japan, how shall I say it—consumption and leisure time go together. It takes time to spend money the way Americans do. And the Japanese just don't have the time or the space.

An American family that gets a little better off may want to buy a little cabin in the woods or a boat or a trailer or something along those lines.

That kind of consumption is not an option in Japan. If you work 6 days a week and if you had a boat, there's no way to get to the water because the fishermen control the access and all kinds of things tend to channel people's thinking into saving.

But more fundamentally it is that when things are going well the frame of mind outside of the United States is to think well they probably won't go as well in the future so I'd better put some money away. We are uniquely optimistic.

Representative HAMILTON. Senator Bryan.

Senator BRYAN. Let me put the question in a little different context.

Why is it that the Japanese and Europeans save so much more than we do? Is it historical, as we are suggesting, in part, in answer to the chairman's question; is it cultural; is it driven by their tax policies?

Second, we hear that the Japanese are moving to a shorter workweek. Will their savings rate fall as a consequence of that additional potential leisure time?

Mr. MAKIN. The Japanese are not going to move to a shorter workweek, I can assure you. The reason the Japanese work on Saturday is easy to see if you live in Tokyo for a while. It is simply that you would not want to stay in a very small apartment with three small children running around so you tend to go to the office.

These are very real determinations of lifestyle, that people tend to spend Saturdays finishing up the things that they couldn't do during the week and then go out for drinks around 3 o'clock. So that's not going to change because it's built into the constraints on living space.

Ironically until last year, of course, the Japanese tax code did in effect not tax a full two-thirds of accumulated saving because they had accounts that allowed interest to be paid tax free. There were nominal limits on the accounts, but there was no enforcement of the multiple use of accounts.

I recommend a film to you titled "The Taxing Woman," which is not only amusing but it's about tax avoidance in Japan. So the Japanese also save a lot in tax sheltered—illegally tax sheltered accounts. And this money finds its way into the financial markets.

Senator BRYAN. Will recent changes in the tax code in Japan change the rate of savings there at all?

Mr. MAKIN. It's too soon to tell since it just went into effect. I frankly doubt if it will.

Senator BRYAN. Are we to reach the conclusion—and I invite the other members of the panel to respond—that it is tax policy that, in part, drives the savings rate?

Mr. STEUERLE. Senator, I think the general conclusion of economists is that it has not been tax policy that is driving the differences in saving and investment. Again it has to do with a lot of factors—Mr. Makin has mentioned a number of them. It is not tax policy.

One thing that we don't know yet is the effect as Germany and Japan approach the United States in terms of per capita income.

We don't quite know how they're going to react when they actually get up to the point where they are consuming at our levels. In fact, Japan is not there yet.

One reason Japan has saved so much, as Mr. Makin has pointed out, is the fact that they have not been consuming nearly as much as has been possible for them to consume.

So we're not quite sure whether these cultural factors are going to be the same once these countries reach a per capita income or per capita consumption that's equal to the United States.

And there are other factors. For instance, in the United States we've probably led the world—I'm not sure we're leading it any more—but we led the world in the types of investment we made in education and training for years and years. So in part our money was going off to a different form of investment than these other countries.

If you add together education, training, and all these other much harder-to-measure factors, in fact the differences in investment and saving are also less.

Senator BRYAN. Mr. Auerbach.

Mr. AUERBACH. To whatever extent tax policy can affect private saving, I think that is small relative to national differences that have persisted over many years. You've heard some of the potential explanations, differences in standards of living among countries, countries trying to catch up—certainly it's true of Japan and Germany that a large part of their high-saving rate was associated with the destruction of their assets during World War II.

I don't know of any economists who would claim that the major factor influencing differences in national savings rates is tax policy.

Senator BRYAN. Thank you, Mr. Chairman.

Representative HAMILTON. Congressman Upton.

Representative UPTON. Thank you.

I believe I'm correct when I say that the savings rate in the United States was actually increasing when we had the IRA's, is that correct—or at least it stopped from going down. What was the trend line in the late seventies and early eighties before the IRA came into effect?

Mr. AUERBACH. Well if one looks at the personal savings rate as measured in the national income accounts—and there is some question of whether that's the right rate—the saving rate actually has been lower. If you took an average of, say, 1981 through 1986, it was lower during that period than it was in the preceding 3 years.

Now one could argue that it might have been lower still had IRA's not been in effect. But certainly we can't make a simple correlation between personal saving rate and the IRA's and say that the IRA's caused some increase in personal savings.

Mr. STEUERLE. Again, Congressman Upton, as I've tried to point out several times, the money put in IRA accounts does not necessarily translate to net saving or net investment.

A lot of money in IRA accounts went to savings and loans, for instance, that may have put the money out to finance additional mortgage lending by people who already owned their homes and

took out a second mortgage. Second mortgages became very popular in the eighties.

A second mortgage is a way people have access to funds. Perhaps IRA's reduced the rate of interest that people had to pay, so the cost of current consumption through borrowing went down. Some of the money that's being made available in deposits was simply borrowed on the opposite side of the ledger to finance consumption.

That's why you can see gross IRA deposits go up and not necessarily see net saving in the economy go up. That's one of the ways in which money gets moved around the economy.

Representative UPTON. So you think there is some hard evidence then that some of these moneys were simply representative of funds shifted from different accounts?

Mr. STEUERLE. That's correct. But it's not just shifted from different accounts for the household. That is, it's not so much that you went into the bank, walked up to one teller and said, "I want to put my money in an IRA," and then walked over to the next teller and borrowed a similar amount.

What's more likely is that you put $3,000 in the IRA account and then a couple of years later you are going to finance your child's education and you realize, "well I really need about $3,000 more" then you borrow that and in effect your net saving is zero.

Or the consumer might not be you. When you put that money in the account, the savings and loan has the money and can start sponsoring some additional types of borrowing. They start sending out more leaflets to individuals and somebody else borrows that money. Again it may not necessarily translate to net saving in the economy if the borrower finances consumption with it.

Representative UPTON. Have any of you on the panel taken a look at the linked proposal, I guess you could say, the proposal that came out of the Bush administration in the last couple of weeks on an IRA plan modified from what we had seen in the early eighties?

Mr. MAKIN. As I understand it, the proposal is to allow the withdrawal of the accumulated funds in the IRA account tax free, is that correct?

Representative UPTON. That's right.

Mr. MAKIN. I did take a look at that and I did want to point out that the IRA incentives that are already in place perhaps ought to be better publicized. That is, the fact that interest accumulates tax free is in fact more valuable than being able to deduct the $2,000 up front for an IRA account that's held over a working life.

Obviously, if people are told that when it comes time to take the money out of the IRA you're not going to have to pay tax, that's attractive. And its value and attractiveness depends on how far away the prospective withdrawal is. If it's 30 years away, the present value is relatively small but the plus is that the cost to the tax system in terms of revenue is small, so that's attractive.

You know, again it's a possibility. It's something that certainly isn't going to hurt saving. I think you wouldn't want to promise too much for it because if you calculate the value of what's already there in terms of the interest buildup, that's more valuable than saying well you can take it out tax free after 20 years.

If that type of provision presented the opportunity to remind Americans—maybe even with a table that they could look at the

bottom line and see the value of the IRA—that the IRA is still useful to you because the inside buildup is tax free and now we're adding tax-free withdrawal, that might help saving a bit. It's not going to hurt saving.

Mr. AUERBACH. Can I ask a question to clarify the proposal?

How would money currently in IRA's be treated, money for example that has gone in post-1986 without an initial deduction?

Representative UPTON. I don't know how they address that.

Mr. AUERBACH. I would just add a caution that where funds exist currently in IRA's, either the pre-1986 IRA's or the post-1986 IRA's which didn't qualify for deduction, were those funds, were they withdrawn, also given the benefit of a tax-free withdrawal, that could lead to a very significant immediate withdrawal of funds for people who would be at least 59½ years old, who could without penalty.

There may very well be people who have just reached the threshold age, 59½, 60, 61 years old who might be planning to keep the money, and the potential tax payment would encourage them to do that until they really need it. That money is already there; it doesn't constitute new saving. Removing the tax that would be due on that would represent an immediate windfall and conceivably decrease private saving at the same time. So I would urge you, in thinking about such a plan, to focus effectively on IRA's that have not yet been established rather than on old IRA's.

Mr. MAKIN. That's a very important point. Windfalls are always popular but they lose money. And the cruel thing about saving incentives is that if they are going to work you have to say that what you've done so far does not count, it's what you're going to do in the future. That's what we essentially mean by marginal. And it's very easy for proposals like that to slip into giving windfalls because people like them, but such windfalls are not going to help saving.

Representative UPTON. How would you all explain the fact that in Canada, when IRA-like tax shelters were expanded—in the early seventies I believe it was—their private savings rate increased quite a bit certainly relative to the United States. Doesn't that suggest that the tax policy really does have some type of impact there? Why wouldn't it have had such a dramatic impact in the United States?

Mr. MAKIN. My recollection there, and I may be wrong, but I think that those incentives were designed a little differently from ours. In fact, I know in some cases they were because I was living there. That is, that you could earn up to a certain number of dollars of interest that would not be taxed.

Representative UPTON. Do you remember what the level was?

Mr. MAKIN. It varied, but for most households it amounted to tax-free interest on accumulated assets, and I don't remember whether they were careful to design marginal incentives, that is, that you only got the break if you added to your assets, but if they did then that would probably account for some of the positive response.

Mr. AUERBACH. They did have something called the RRSP's, the registered retired savings plans, which are similar to IRA's. I personally can't give you an explanation. There are other differences

in the tax system in Canada. Canada does not allow the deduction for mortgage interest, for example.

If one wanted to consider various factors in the tax system that might be associated with differences in the private savings rate, one would probably want to look at all of the conditions together and not just at the IRA-type plans.

Mr. MAKIN. If the committee would indulge me in making a request.

I would very much like to see the effect on net revenue of a provision that allowed the deduction of only half of interest expense and the taxation of only half of interest income. I know that it would be a big revenue gainer because much of interest income is earned by pension funds that are tax free and the interest expense deduction is used very aggressively by households and businesses.

Revenue gains would probably be—if you allowed half deduction of interest expense for owner-occupied housing, $17 billion. I suspect the revenue gains would be around $50 billion, but I would be happy to see the Joint Tax Committee make the estimate and prove me wrong.

Representative UPTON. Thank you, Mr. Chairman.

Representative HAMILTON. Senator Roth.

Senator ROTH. I'd like to go back to the comparison of the United States and Canada. There was an NBER study by Chris Carroll and Lawrence Summer who compared the divergent rates of the United States and Canada. One focus of their study was on the tax sheltered retirement plan. According to the authors, after moving in tandem for almost 25 years, American and Canadian private saving rates have diverged dramatically over the last decade.

The primary conclusion emerging from our analysis of this phenomenon is that tax policies can have a potent impact on private savings behavior. Differences in tax structure and interaction of taxation and inflation appear to be important factors in explaining the divergent behavior of the American and Canadian private saving rates.

The point I want to get back to is that if there is any country that is similar to this it is Canada, and there are some economists who have made a careful study and come to the conclusion that their savings, their sheltered retirement plan, has made a significant difference between Canada and ourselves.

I might say with respect to Japan—and I have been a frequent visitor of that country over the years—that although you do get some divergent view there as well as here, there is the view that the tax incentives have been very significant in developing the savings rate in Japan since World War II; it was not, as some have claimed, a cultural practice of the past.

I think we are all in agreement, if I understood the earlier testimony, that tax incentives for savings can make a difference. Is there anyone that disagrees with that?

Mr. AUERBACH. I would say that they certainly can make a difference. How they are designed matters a lot and the extent to which they will alter saving is unknown.

Senator ROTH. Assuming the first conclusion is accurate, isn't it also true that there is no general agreement, even among econo-

mists, about how to best fashion those kinds of incentives? There are different approaches——

Mr. AUERBACH. I don't think that's true. Economists, in fact, may differ with respect to how sensitive saving will be, but as I think we've all pointed out in our testimony this morning, it is important to focus on marginal saving, trying to focus any revenue costs on money that would not otherwise have been saved to encourage saving. Spending revenue on saving that would have occurred anyway or, even worse, saving that's already been done in the past, is the worst way of doing it because you're spending more to get the same impact on additional saving.

Senator ROTH. I would point out, Mr. Auerbach, that I have referred to two studies which were done by responsible economic organizations. They don't come to that——

Mr. AUERBACH. They're not really on that point. I don't——

Senator ROTH. They're making the point though that IRA's did make a difference.

Mr. AUERBACH. That is a separate point. One could——

Senator ROTH. Well let me make that point.

Mr. AUERBACH. OK. Fine. I'll stipulate that point.

Senator ROTH. All right.

Mr. AUERBACH. Let's all accept the fact that IRA's do make a difference, although it is uncertain the extent to which that difference is there. Then the question is in fashioning IRA-like incentives or other saving incentives, how can you do it in a way that costs the least amount of revenue?

There are clear differences among proposals. If you were designing an IRA, there would be general agreement among economists that you should seek to tailor it in a way that would prevent people from simply saying well I have $2,000 here, I'll just move it from one place to another and get a tax deduction for it.

If you force people really to come up with new money in order to get the tax deduction then it's hard to see why that wouldn't be a better way of encouraging saving, to whatever extent saving responds to tax incentives.

Mr. STEUERLE. Senator, may I raise another issue that hasn't been brought up yet? It's one of the most difficult issues with which to deal: the relationship between saving incentives like IRA's and our general pension policy.

When we've adopted incentives where individuals selectively decide whether to take advantage of the incentive, so far we've found that it's mainly been middle and upper income individuals who have taken advantage of these incentives.

There are concerns of those people who examine retirement policy that the more we move to these types of incentives, the less pressure we have to adopt pensions that provide widespread coverage for all employees.

That is, higher income individuals capable of taking advantage of IRA-type accounts, to the extent that they're open ended, will put money in the IRA's and no longer put pressure on the employer to provide a pension plan, a pension plan that in many cases will cover lower income individuals who might not otherwise save.

That's one of the ways in which one can actually have a policy that initially increases saving, but, over a long term, has a detri-

mental effect. I think that's an issue with which one should be concerned.

Senator ROTH. I want to go back to this report that I mentioned, the 1987 study. According to the report, Working Paper No. 2217, by Professors Vente and Wise, the data showed almost no substitution of IRA's for other savings. Moreover, this study noted that IRA's comprised about $45 billion, about one-fourth of personal savings by 1986.

Let me ask you this question: Is there hard evidence that most contributors to IRA accounts in the mideighties were other than middle-class taxpayers? In other words, is there statistical evidence showing that most contributors were not in fact middle class?

Mr. AUERBACH. You are correct, most contributors were middle class.

If one wanted to paint the picture differently—and equally correctly, the participation rate in IRA's, that is, the fraction of the population at any income level that chose to invest in an IRA, was very, very low at low-income levels and increased quite markedly at higher incomes.

The fact is that there aren't that many high-income people in this country relative to middle-income people. So that when you look at the aggregate statistics——

Senator ROTH. Is there anything wrong with promoting savings by the middle clsss?

Mr. AUERBACH. Absolutely not.

Senator ROTH. Is there any hard evidence that the increase in savings in IRA accounts after 1981 were not new savings but represented funds shifted from other accounts? What is the availability of statistical evidence showing that the higher level of IRA balances were not new savings?

Mr. STEUERLE. I think even the Vente and Wise study points out that initially quite a bit of the money that went into these IRA's involved shifting. The point they try to make is that after so much shifting takes place, new deposits in IRA's tend more likely to be new saving.

At that point one gets to my next issue, which is the question of whether these supplies imply net new saving to the economy. Again, because we have to be concerned with who's borrowing the money and for what purpose they're using it.

Mr. MAKIN. Based on the Vente and Wise study I think that you would say that we probably—having put the IRA into place, had it in place and had people drawing money out and eventually getting to the point where they'd have to actually do new saving, it probably would have been better to leave it in place than to not leave it in place. Let's say you had individuals with average incomes that had accumulated assests of $6,000 and let's grant that for 3 years they were moving $2,000 a year into the IRA account and then gradually they get to the point where they are actually going to have to save the money in order to make a contribution.

I think Vente and Wise were finding that that phenomenon was becoming increasingly prevalent as time went by, which is as one would expect. But where the dispute comes is what would happen over the long run and how long did it take and how do you disentangle these activities.

But I think we could say that having had that IRA approach in place for, what, 5 or 6 years, we may have abandoned some marginal saving incentive for lower income individuals by removing it.

Mr. Chairman, excuse me.

Representative HAMILTON. Yes, I understand, you have to leave, Mr. Makin. Thank you very much for your participation, we appreciate it and hope you have a good trip.

Do we measure savings correctly in this country? Are you satisfied with the statistics? You work with savings statistics all the time.

Mr. AUERBACH. It depends on what you want the number for.

If you wanted a measure of the rate at which wealth is being accumulated by the country, then you would want a broader measure even than the national saving measure that we have. You would want to include government capital accumulation, you would want to include accumulation in human capital via education. You would want to include accumulations of knowledge in terms of research and development.

One of the problems with doing that—and I guess one of the reasons we don't do that—is some of those things are very hard to measure.

Representative HAMILTON. If I go out here and buy a car, that's consumption, isn't it?

Mr. AUERBACH. That's right. That's not included in saving and investment accounts.

Representative HAMILTON. Is that the right thing to do?

Mr. AUERBACH. I think for cars it's probably not, but it doesn't strike me as the most significant problem.

Representative HAMILTON. It's not all that important?

When you begin to compare savings rates between the United States and Japan and so forth, are we comparing the same thing or are we comparing apples and oranges.

Mr. AUERBACH. The OECD numbers that I gave in my testimony are based on an attempt to standardize national accounts.

Representative HAMILTON. We are talking about——

Mr. AUERBACH. Attempted.

Representative HAMILTON [continuing]. Similar definitions——

Mr. AUERBACH. Yes.

Representative HAMILTON [continuing]. Is that right?

Mr. AUERBACH. Yes, similar; to the extent that such similarities can be imposed, yes.

Mr. STEUERLE. I think the bottom line, Mr. Chairman, is there are a number of problems with the savings statistics, but they are not so great that we would discount the differences across countries.

One reason, of course, is if we were only measuring savings in terms of physical investment—that is, saving in physical plant and equipment—we do have a decent way of measuring total investment. We have a real balance sheet item against which to check our figures.

Representative HAMILTON. What do we know about the 1986 tax law in terms of, one, savings, and, two, investment?

Mr. AUERBACH. We know about investment and savings performance in the last couple of years. We know less about the effects of the act on savings and investment.

We do know that personal saving declined in 1987 but then began to increase in 1988 and has continued to increase in the first quarter of 1989.

Representative HAMILTON. Do you attribute that to the Tax Code?

Mr. AUERBACH. No, I think shortrun movements like that are just very hard to attribute to a tax change——

Representative HAMILTON. Do you have any——

Mr. AUERBACH. There is just so much else going on.

Representative HAMILTON [continuing]. View on that, Mr. Steuerle?

Mr. STEUERLE. The aim of the 1986 act is not to increase net savings and investment; it is to make the allocation of that savings and investment more efficient. And in that sense it has proven to be a success. Again, 1 data point does not prove a thesis. But I think the act has improved efficiency of the economy and therefore has promoted growth.

This gets back to your earlier question——

Representative HAMILTON. But you're not claiming that the 1986 tax law has promoted savings or investment? You're claiming it has promoted growth. That's a different thing, of course.

Mr. STEUERLE. I think that's correct. I think the jury would be out on its total impact upon net savings.

Representative HAMILTON. So both of you are saying that we really can't tell at this point whether the 1986 tax laws have had an impact on savings or investment?

Mr. AUERBACH. I would have said that there is no question that the tax burden on new investment was increased by the 1986 act.

Representative SCHEUER. Increased by what?

Mr. AUERBACH. Increased by the 1986 act.

At the same time the decline in real interest rates that has happened in the last few years has been more significant in the effect on the cost of capital that firms have faced. So one shouldn't expect investment to have gone down or weakened in the last few years as a result of the Tax Act. Other more important economic factors have been at work.

Mr. STEUERLE. In terms of Mr. Auerbach's first thesis, I'm not sure we would disagree. But the net change in effective tax rates on capital, if you count all capital and you count personal tax rates, tax rates on plant and so forth, was fairly small.

Representative HAMILTON. So it really, in your view, has not had that much of an impact on investment?

Mr. STEUERLE. If you accept the statistic that the act didn't change effective tax rates very much, then it probably would not be anticipated to have a great effect upon net investment. Again I go back to the point that the type of investment we get, the type of savings we get is very important.

Representative HAMILTON. How effective was the act in achieving neutrality.

One of the arguments made was that we created a level playing field for investment. Did we achieve that?

Mr. STEUERLE. We certainly achieved a more level playing field. We did not achieve a completely level——

Representative HAMILTON. Is that desirable?

Mr. STEUERLE. Most economists would say yes.

Mr. AUERBACH. Yes, it is. But one shouldn't overstate the potential impact that such tax changes would have on the mix of investment.

Look at investment in the last few years. It's mostly equipment investment. There has been an explosion in equipment investment.

Information processing equipment now represents about a quarter of all business-fixed investment. And the tax treatment of that was not made more favorable. That was something that was hurt by the 1986 act.

Representative HAMILTON. What about the investment-tax credit? How does that all shake out?

Mr. AUERBACH. That certainly would be expected to cause affected assets to be less attractive, and, other things being equal—which they are not—would cause firms to shift away from those investments to others. But many other things have happened over this period.

Mr. STEUERLE. But remember also, Mr. Chairman, that the elimination of the investment-tax credit basically financed rate reduction, which basically provided——

Representative HAMILTON. I'm sorry, I didn't hear you.

Mr. STEUERLE. The elimination of the investment-tax credit was mainly used to finance tax-rate reduction. That rate reduction, both for individuals and for corporations, helped to offset any effect of elimination of the investment credit upon investment. In addition, the act helped to increase labor supply. It also tended to promote competition in the economy because our investment incentives very much disfavored new businesses and small businesses who could not compete because they often could not make full use of these incentives.

If one believes that competition is as important to growth as is the total supply of investment and savings, I would worry about reenacting something like an investment incentive. At least the way it was enacted before did deter competition.

Representative HAMILTON. Do we have a bias in our tax system today against certain kinds of investments or do you think we have pretty well removed that?

Mr. AUERBACH. We still have a bias against all investments other than housing, pretty much. Housing is the one favorite investment relative to——

Representative HAMILTON. Do we have a bias against other kinds of investments?

Mr. AUERBACH. Relative to housing it's a question of how one measures—we need a benchmark. Certainly housing is favored——

Representative HAMILTON. Housing is greatly favored.

Mr. AUERBACH. Relative to other investments.

Mr. STEUERLE. I think housing is favored for higher income individuals, the people who might buy second homes. I think the property tax tends to offset the income tax favoritism for moderate- and, in fact, most middle-income taxpayers.

There is one additional class or group of taxpayers who are disfavored, and that is the group of people who would start new businesses, especially where those new businesses would be highly risky. Typically, when a business is going to be highly risky, it requires incorporation.

New business faces a double tax. It faces both the personal and the corporate income tax. And to that extent I think we've favored——

Representative HAMILTON. Should we, as a matter of national economic policy, favor certain kinds of investments? And, if so, how do you do it? Or do you think we ought not to favor any particular kinds of investment?

The theory of the tax bill is you ought not to favor it, right?

Mr. AUERBACH. One shouldn't favor one kind gratuitously.

Representative HAMILTON. Let's get that out of the way for a minute. I guess the question is, should we, as a matter of national tax policy, favor certain kinds of investment over others? We do favor, as you say, housing today. Is that the right kind of a policy?

Mr. AUERBACH. For other investments, you mean——

Representative HAMILTON. Yes.

Mr. AUERBACH. Or for housing as well?

Representative HAMILTON. Well look, what we want is strong economic growth; that's our objective here. So the question is, in order to achieve that, should we favor certain kinds of investment over other kinds?

Mr. STEUERLE. We should not favor one form of physical investment over another. Occasionally we may find cases where we think there is some reason the market is not operating efficiently. As I pointed out in the case of education and research, in those cases, yes, we should sponsor investment.

However, I do not know at this point of any particular case of a physical investment in plant or equipment that should be favored over some other types of investment.

Representative SCHEUER. Mr. Chairman.

Representative HAMILTON. Congressman Scheuer.

Representative SCHEUER. Let me give you an example of choices in plant and equipment that I think might present us with some policy options.

In terms of our national productivity, there is a consensus that we ought to be investing more in research and development, new plant and equipment, and new products, to try to undergird a more productive economy.

Now, in terms of the fierce competition that we're in globally, it really doesn't affect our global competitive stance whether we build more or fewer new apartment houses, new office buildings, new shopping centers, new supermarkets; it doesn't really affect our competitive posture one whit.

But research and development in the whole vast array of goods and services that we export, and really fierce global competition, do affect our competitiveness. If we can produce a better chip or if we can get together with all of our three major automobile companies and produce one car that will sell in global commerce successfully, that has enormous implications for our economy.

It also means that we had better have a look at the Sherman Antitrust Act, which was written almost exactly a century ago under conditions far, far different from today's. That act was trying to assure competition in the domestic market. We may have to do things differently to assure that we can compete effectively in a global market.

But doesn't it seem to make sense to try to channel investment into research and development and then new plant and equipment in designing the products and services that we hope to export and trade and thereby sustain the American standard of living, rather than leave all of those areas where investments are urgently needed on a level playing field with, as I said, office buildings, apartment houses and hotels and shopping centers that don't affect our global competitive posture a whit.

Mr. AUERBACH. There are a couple of different points that you're making. Mr. Steuerle made the point already, and I certainly agree with it, that there could be a special argument made for research and experimentation, research and development expenditures, given the potentially very large spillover effects that such might have: that it may be hard to get one company to undertake such research when it might benefit an entire industry. I think that's part of what you were talking about.

However, one might want to distinguish that from ordinary plant and equipment investment, building factories and so forth. It's true that that may make us more competitive whereas building an apartment building may not, but to the extent that the investing company is able to benefit from this added competitiveness by exporting and to the extent that this is something that they can understand, it's not clear why that shouldn't in itself be enough of an incentive for them to make the investment.

You have to come up with an argument that they are myopic, they are not realizing the benefits of competitiveness that they are going to achieve by undertaking this investment, or that somehow the national good is served more than the individual company's income statement will show.

Otherwise, if I'm an American automobile company or a steel company or some other company in a trade-sensitive market and I'm worried about an international, not domestic, market share that will be very responsive if I can come up with a better product, then that ought to give me a very large incentive to come up with a better product, more so than if I were simply operating in a domestic market.

Representative SCHEUER. Yes, but don't you have more difficulty raising the very large amounts of capital necessary to produce a new car or a better quality of steel—wouldn't you have an easier time doing that—if our society said to an investor, you'll get a better return, you'll get a better tax rate, you'll get a better something if you invest in something that contributes directly to the productivity and the competitiveness of our society?

And if you want to invest in yet another hotel or yet another apartment house or yet another shopping center, fine, but you're not going to get quite the incentive package that we would give you to induce you to invest in America's competitiveness.

Wouldn't that make it easier for a productive enterprise to raise the capital?

Mr. AUERBACH. I don't think General Motors, for example, has any trouble raising capital. The issue is whether they or another large American company would think it worthwhile to undertake an investment without tax incentives.

Representative SCHEUER. Well, let me give you an example of General Motors, and then I'll yield back my time because I didn't mean to get into a long digression.

Representative HAMILTON. Take your time. No hurry.

Representative SCHEUER. At the present time, the Germans, the Swedes, the French, and the Japanese all have prototype cars that get roughly 80 miles a gallon in the city and 100 miles a gallon in the country, on the open highway, and the Japanese have one that gets 120 miles a gallon on the open highway.

Perhaps it makes more sense for them to invest the billions of dollars that it takes to produce the dies and the mold or whatnot for those cars because in those countries there is a feeling among gasoline consumers that this is a product that's scarce and expensive.

Traditionally, Western Europe and the rest of the industrialized world has taxed gas at a minimum of $2.50 a gallon to $3 a gallon as compared to our 10 cents a gallon. That has concentrated people's minds over a long period of time on buying cars that are fuel efficient and also are less polluting. It makes sense for the individual to invest in that extra $1,000 or $1,500 per car to achieve energy efficiency.

In recent months the American automobile industry has told us that with gas taxed at 10 cents a gallon and with gas selling around $1 a gallon, it really doesn't make sense for American consumers to spend a whole lot more per car. For us to compete with the Japanese and the West Germans and the Swedes and the French, it would cost several thousand dollars per car, and, the way we compute it, the average automobile owner would figure that with the mileage that he travels he'd get that additional investment back in about 3.5 or 4 years, with a car that only has a life expectancy of 5 or 6 years. There are probably not many people who are going to make that investment in that much more fuel efficient car.

So they have told their people, their engineers and designers, don't get off into a wholly new science, don't try to create another level at the cutting edge of science. See what you can do massaging existing technology.

And our automobile companies have done that, several of them, and using existing technology they've come up with cars that get about 50 miles to a gallon, maybe 50 to 60 miles a gallon, with prototypes. That is excellent, it's more than double the fuel efficiency of the existing fleet, which is about 25.5 miles per gallon.

But wouldn't it be well for us to give the automobile companies a little bit of an assist in raising the capital by which they could spend whatever number of billion dollars it would take for them to produce a car that's competitive with the Japanese, the Germans, the Swedes, and the French.

Mr. AUERBACH. If you want a car that's competitive with those of other countries in terms of fuel efficiency, that means you want fuel conservation more than our domestic cars are going to give you.

That means that you think that the costs of burning up fossil fuel, in particular gasoline, are greater for a variety of reasons, including pollution, than the $1 that people are currently paying per gallon.

There is a very direct solution to that, which is to tax the energy directly. That will give the automobile producers a very large incentive to come up with more fuel efficient cars.

Representative SCHEUER. How do you react to the suggestion of Time magazine last January in their issue entitled "Globe of the Year," where they recommend a 50-cent-per-gallon tax on gasoline?

Mr. AUERBACH. I would be concerned about the distributional effects, but assuming that thought was given to that and perhaps other measures were taken along the way, perhaps in terms of adjusting individual exemption levels or the zero bracket amount, that that would be a very good idea.

Representative SCHEUER. Would an additional 50 cents a gallon bringing the price of gas up to say $1.50 a gallon or $1.60 a gallon, would that be enough to create an incentive to invest another $1,000 or $1,500 to produce a very much more fuel efficient car, or would it take a tax more or less on the order of magnitude of what is the going rates in Europe, which is $2.50 to $3 a gallon?

Now you might have a revolution here, you might have blood running in the streets. And urban areas out west might be saddling up their horses and fixing their bayonets to march on the cities and the urban centers back east, who they perceive are less dependent on the car. But is another 50 cents a gallon enough to make that investment of another thousand dollars or so an attractive investment for the car purchaser and therefore an adequate incentive to the automobile companies to invest the billions that they would need to get into that wholly new area of technology?

Mr. AUERBACH. To turn the question around, is 50 cents enough of a tax to set the price of gasoline at what it ought to be when one takes account of the social costs of using it?

And if it is enough, then that's the price you should set for it.

Representative SCHEUER. Thank you, Mr. Chairman.

Representative HAMILTON. I'm not sure that we've talked about the impact of the capital gains tax on investment and savings.

What is the evidence on how changes in capital gains tax rates affect the savings, on the one hand, and investment, on the other?

Mr. STEUERLE. I think the evidence is very mixed, Mr. Chairman. Part of the reason is related to estimates of the responsiveness to capital gains changes. Let's say it's revenue neutral, in terms of the effect of a reduction. In fact, what we've done for the most part is replaced one particular taxpayer with another type of taxpayer. That is, we've lowered taxes for people who realize the same amount, we've upped them for people who increase their realizations. But if the total tax collection is the same, the effect on effective tax rates is approximately the same. So the net benefit of the capital gains change is mainly to induce more portfolio shifting, to allow people to move their portfolios around more easily. That is, if

we haven't changed their taxes, then we haven't really changed——

Representative HAMILTON. Then you're not changing savings or investment?

Mr. STEUERLE. Well let me follow through: I'm not sure we have affected net saving or investment. The next question that is then asked is, "Well, do we at least encourage people to put more money into particular types of capital—that is, the type of capital that would involve capital gains?"

I personally do believe we don't have adequate investment in very risky capital. I'm not sure that lowering the capital gains tax is necessarily the best way of getting at that problem.

Representative HAMILTON. Do you agree with that, Mr. Auerbach?

Mr. AUERBACH. I would take issue with Mr. Steuerle's point. A reduction in the capital gains tax rate, even if it doesn't have any effect on revenue, would reduce the effective tax burden on a prospective investment for a person thinking about holding an investment for a period of time.

But while a reduction in the capital gains tax rate might encourage certain kinds of investment, I would not favor it as the method to be used to encourage the kinds of savings that one normally associates with the capital gains tax, such as venture capital investment in risky enterprises.

Capital gains received by taxable investors in new startup enterprises, risky enterprises, is very small relative to all capital gains realized. Moreover, a reduction in the capital gains tax rate wouldn't simply affect all new investments but it would affect the stock of accumulated gains that people have earned and are sitting on. That has very significant revenue effects.

Representative HAMILTON. What about the proposal I think Mr. Makin was making earlier about the indexation of capital gains, the indexation, I guess, of the basis? Is that a good move?

Again with respect to investment and savings, that's what our target is here.

Mr. STEUERLE. As you know, in Treasury I, I attempted to put just such an indexing proposal in the package. I tend to favor it still, mainly on the basis that it's going to create the right type of allocation of capital. It's going to create the right types of incentives, for instance, for those people who may worry about the inflationary tax who perhaps do want to realize returns in the short term.

We should worry about the effect of inflation on those people who want to get in and out of a venture, because the tax system really does impose a double tax. Now it may, on the opposite end, give a windfall to some other people. So I'm more worried about the allocation than I am with the——

Representative HAMILTON. Is it correct, generally, that economists favor the indexation of capital gains? I mean, is that broadly agreed upon by economists?

Mr. AUERBACH. I think it would be agreed upon by a greater fraction of economists than would agree on a reduction of the capital gains tax rate, particularly if you made the indexing prospective, so that you said basis as of today.

Representative HAMILTON. We were talking a little earlier about IRA's, and Senator Roth was pursuing that. How do you structure IRA's so you avoid shifting of funds?

How would you structure an IRA? Maybe that's the broader question.

Mr. STEUERLE. The only complete way I know of getting there—and I don't necessarily favor this, but the only complete way I know of getting there is to go all the way to a consumption tax. In effect, you measure for each individual in the economy their net saving.

In order to do that, you would really have to require individuals to keep a type of capital account or at least measure their net change in saving in all of their accounts, so you know all the flows in and out——

Representative HAMILTON. It would be very complicated.

Mr. STEUERLE. I think it would be very complicated.

There are back door ways in which one can reduce the amount of the shifting, for instance, by reducing the deductions, for instance, for interest. That gets to the borrowing question. I'm not sure of backdoor ways to deal with asset shifting.

Mr. AUERBACH. You might put a floor on deductibility. But that's not going to pick up asset shifting. It would to a certain extent not give people credit for saving that they would have done anyway.

But it's very difficult to design a system where there isn't this kind of leakage when you're only talking about a particular kind of saving that they're doing and they have all kinds of assets.

Representative HAMILTON. Mr. Feldstein, who was going to testify today but was not able to do so, has suggested several changes in the current tax law in order to provide more incentives to save. Those changes—and I'm going to ask you what you think about the proposal—would include increasing the income limits for IRA eligibility, indexing those limits to keep up with income growth in the future, that's one—you don't need to comment on all of these but whatever strikes you.

The second one is providing an IRA-type tax treatment for long-term deposits that may be withdrawn before retirement.

Third is introducing IRA-type accounts for special purposes: home purchases, education, and so on.

Fourth is phasing out the remaining interest deductions for consumer interest financed by home equity loans.

Fifth is indexing the cost basis in calculating taxable capital gains; we just talked about that.

Sixth is excluding a fraction of interest income and expense for tax purposes based on the ratio of the inflation rate to the interest rate on government bonds as a proxy for indexation.

Now the question is, How you would evaluate these proposals? What reaction do you have to them? Should we do it, I guess, is the bottom question?

Mr. AUERBACH. I think it's easier to analyze them taken as a group than individually. Taken as a group, these proposals are seeking to move the tax system much closer to an expenditure tax or consumption tax. Or to put it more simply, exempt capital income from tax and eliminate the deductibility of interest.

This seems to be saying that you can have an IRA for any purpose, not just for retirement, pretty much you can have any kind of tax-free savings deposits you want. All of your accumulations can be tax free.

I would be concerned that you're going part of the way toward a consumption tax, allowing lots of tax-free savings without completely eliminating the mortgage interest deduction.

Under an expenditure tax you would allow IRA's for anything you want but at the same time no interest deductions at all. I would worry that moving further and further toward IRA's without curtailing the interest deductions more fully would leave you with a potential problem again of borrowing to invest in IRA's.

It's worth saying because the issue of a consumption tax has been raised, that moving halfway from an income to a consumption tax by introducing IRA's without limiting the interest deduction doesn't put you halfway between the two tax systems.

It makes you worse off in terms of national saving than you'd be under either the income tax system, where you would deduct interest and pay taxes on your income, or under a consumption tax, where you would not receive an interest deduction and not pay taxes on your income, because you'd have an opportunity to borrow money and then put the money into a tax-favored account and get an interest deduction for doing no net saving at all. Whereas, under either of the other two systems, that wouldn't be possible. It's that kind of mismatch that I would be concerned about here.

Mr. STEUERLE. I would tend to agree with Mr. Auerbach. The last two items, however I wouldn't put it in the consumption tax category. In fact, they actually move toward an income tax. A deduction for a fraction of interest received and a corresponding deduction or disallowance of a fraction of interest paid is an attempt through the back door to get at indexing interest. In fact, that was proposed in Treasury I, as well as indexing of cost basis for capital gains.

So the last proposals are consistent with the notion of an income tax, consistent with the notion that those who receive income from capital also have some obligation to pay a tax in society for the public goods that the society provides to them.

I would also agree with Mr. Auerbach on the problems of changing the IRA rules. Again, I refer you back to something that we have not discussed very much and that's the question of the impact upon retirement.

To the extent we encourage people to withdraw money from IRA-type accounts and pension accounts earlier, we only exacerbate the problem of long-term care and similar problems for the elderly population.

What one wants to consider when one addresses the IRA question—I'm not saying that I've thought it through completely—is how IRA's impact upon total retirement policy.

Representative HAMILTON. Suppose we decided here in the Congress that we're going to commit $5, $7, $10 billion of budget resources to increasing saving and investment. How should we do it?

Mr. STEUERLE. I don't think I would adopt another incentive.

Representative HAMILTON. You would not.

Mr. STEUERLE. I would not adopt another saving or investment incentive. Even if one believed that these incentives were effective, let's think about the numbers that we're talking about.

If we include all saving and investment by attempting to add in training and education and similar items, we're really talking about an economy in which we have in excess of a trillion dollars' worth of saving and investment. Now that may be inadequate.

Education by itself is about 7 percent of GNP and if you add in training and the roughly 9 or 10 percent of gross investment in physical capital, we're talking about roughly a trillion dollars' worth of investment. Throwing $5 billion at that $1 trillion, even if effective, is not going to make a lot of difference.

Moreover, if it increases the deficit by $5 billion, it may end up that we actually decrease——

Representative HAMILTON. Your argument is that it is not worth doing?

Mr. STEUERLE. If I had $5 billion to spend, I might spend it on trying to get the tax system right. If it costs $5 billion to tax income more equally, and I get efficiency gains from taxing income more equally and attack some other types of problems, I would be willing to spend the money.

But to try to provide a little incentive, the sole goal of which was to increase gross saving or gross investment, I would not——

Representative HAMILTON. It's not worth the effort.

Mr. AUERBACH. If you gave me $5 billion to spend, I would spend it on government capital projects in infrastructure. Because that would probably——

Representative HAMILTON. That would have the biggest kick in terms of productivity?

Mr. AUERBACH. Yes, I believe it would.

Representative SCHEUER. Can you tell us the kind of capital projects and infrastructure you mean that would encourage productivity?

Mr. AUERBACH. I am concerned that because of the absence of a capital budget. Efforts to cut the deficit have shifted the pattern of expenditures away from that spongy nondefense, nonentitlement area, which is where government capital projects, both directly funded and funded indirectly through the States, fall.

I wonder whether the same reduction that has occurred would have occurred were there a capital budget. I think there is a certain amount of illusion that may take place, that there is a sense that we are cutting the deficit by cutting capital projects. It really isn't true.

So I am inferring from that and the decline that we've observed in saving through that channel that we have probably foregone valuable investment projects at the public level that might have benefited productivity. I don't have specific projects in mind but I'm sure that wouldn't be difficult to come up with.

Mr. STEUERLE. Would you accept an amendment to add research to your capital budget?

Mr. AUERBACH. You mean federally sponsored research?

Mr. STEUERLE. Yes.

Mr. AUERBACH. Yes.

Representative HAMILTON. Gentlemen, thank you very much. An excellent hearing.

The committee stands adjourned.

[Whereupon, at 11:30 a.m., the committee adjourned, subject to the call of the Chair.]

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